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SUPPORTIVE AND PALLIATIVE CARE

INTRODUCTION TO PEDIATRIC PALLIATIVE CARE

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Abstract: *Palliative care for children is a holistic approach aimed at improving the quality of life of children and families with a life limiting illness. This article describes the important principles of palliative care practice and the range of conditions where pediatric palliative care is applicable.*

Keywords: *Palliative care, Pediatric, Dying children*

Points to Remember

- *Palliative care is an approach that aims to relieve suffering caused by a disease process without aiming to cure the disease.*
- *Early interaction with a palliative care team may well enhance the quality of life of patients and the families.*
- *In palliative care a multidisciplinary approach is a must.*

References

1. "WHO Definition of Palliative Care". World Health Organization; 1998a. <http://www.who.int/cancer/palliative/definition/en/>
2. Saunders CM and Sykes N (eds). The management of terminal malignant disease. 3rd edn, London, Edward Arnold. 1993; pp4-7.
3. Frager G. Palliative care and terminal care of children. Child Adolesc Psychiatr Clin North Am 1997; 6: 889- 909.
4. Field M, Cassell C. Approaching death: improving care at the end of life. IOM Report. Washington DC: National Academy Press; 1997.
5. Papadatou D. Training health care professionals in caring for dying children and grieving families. Death Studies 1997; 21: 575-600.
6. Debate of the Age Health and Care Study Group. The future of health and care of older people: the best is yet to come. Age concern, London: 1999.
7. International Association for Hospice and Palliative Care [Internet]. [cited 2012 Feb 1]. Available from: <http://www.hospicecare.com/manual/principles-main.html>.
8. Murray MA, Fiset V, Young S, Kryworuchko J. Where the dying live: a systematic review of determinants of place of end-of-life cancer care. Oncology Nursing Forum 2009; 36:69-77.
9. Gerrard R, Campbell J, Minton O, Moback B, Skinner C, McGowan C, Stone PC., Achieving the preferred place of care for hospitalized patients at the end of life. Palliat Med 2011; 25:333-336.
10. McNamara-Goodger K, McLindon H. Needs Based Palliative Care Commissioning for Children, Young People and their Families - A Guide. South West Development Centre. 2011.
11. Wood F, Simpson S, Barnes E, Hain, R. Disease trajectories and ACT/RCPC categories in paediatric palliative care. Palliat Med 2010; 24:796-806.

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SUPPORTIVE AND PALLIATIVE CARE
AN OVERVIEW AND RELEVANCE OF PEDIATRIC PALLIATIVE CARE IN INDIA

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Abstract: *Pediatric palliative care is a relatively new field of speciality carved out between adult palliative care and pediatrics. It provides a holistic approach to care for children with life limiting illnesses. There are conditions defined which need such services which require team work. In India broadly these are cancer, HIV infections, thalassemia, neurological and other conditions. Palliative care aims at improving 'quality of life'. Past, present and future are depicted. Children's palliative care project for Maharashtra and its implications are discussed.*

Keywords: *Children's palliative care, Holistic approach, Quality of life, Key role of professionals, Chronic illness.*

Points to Remember

- *Children with life-limiting or life-threatening conditions have very specific and unique palliative care needs, often different from those of the adults.*
- *The focus is on improving 'Quality of life' which requires introduction of palliative care early in the trajectory of illness.*
- *Children need appropriate pain and symptom management during the course of their illness. This includes not only physical care, but psychological, social and spiritual care for the child and family.*
- *This requires country specific education and training for all cadres of health care practitioners in paediatric palliative care*

- *There is a need for the expansion of palliative care for children and its integration into government policies and national, regional and local health care systems.*

References

1. WHO website for Palliative Care www.thewpca.org
2. American Academy of Pediatrics Palliative Care for Children. Committee on bioethics and committee on Hospital Care. Pediatrics 2000;106:351-357.
3. Lombardi N. Palliative care in an in-patient hospital setting. In: A. Armstrong-Daley and S.Z. Goltzer eds., Hospice Care for children. New York: Oxford University Press, 1993;pp248-265.
4. Aranda S. Global perspectives on palliative care. Cancer Nurs 1999;22:33-39.
5. Lauer ME, Camitta BM. Home care for dying children: a nursing model. Paediatr 1980;97:1032-1035.
6. Goldman A, Breadsmore S, Hunt, J. Palliative Care for children with cancer-home, hospital or hospice. Arch Dis Child 1990 ;65:641-643.
7. Dominica F. The role of the hospice for the dying child. Br J Hospital Med 1987;38:334-343.
8. Paediatric palliative medicine in the UK: past, present, future Richard Hain, Emma Heckford, Renée McCulloch Arch Dis Child doi:10.1136/archdischild-2011-300432.
9. ICPCN Website www.icpcn.org.uk.
10. International Observatory on End of Life Care www.thewpca.org/resources.
11. Hynson JL The child's journey: Transition from health to ill-health. In: Oxford Textbook of Palliative care for children, Ann Goldman, Richard Hain Stephen Liben, eds, Oxford University Press, 2006;pp14-27.

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SUPPORTIVE AND PALLIATIVE CARE

ORGANISING A PEDIATRIC PALLIATIVE CARE UNIT

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Abstract: *The essentials of pediatric palliative care unit is the skilled and interdisciplinary attention to pain and other distressing symptoms; emotional, spiritual and practical support; assistance with complex medical decision-making; and coordination across the continuum of care settings. Though the principle of care and basic structure remains the same, organizing a pediatric palliative care in rural and urban setting differs a lot. It definitely depends on background, culture and availability of resources.*

Keywords: *Pediatric palliative care, Children, Multi disciplinary team, Place of care.*

Points to Remember

- *The goal should be to assist with the care needs of children and their families to achieve the best possible quality of life in accordance with their values, preferences and beliefs.*
- *Palliative care needs in children are varied and according to the respective diagnosis and illness trajectory different approaches and measures are indicated.*
- *As medical and technological advances reduce childhood mortality and improve survival for children with life-limiting conditions, there is a need to integrate effective and efficient child-specific palliative care into national health and social service policy.*
- *It is very important to integrate specialized services like palliative care into the existing health care system for maximum utilization with minimum of cost; yet providing specialty services.*
- *It is also important to focus on the fact that the ideal place of care can change as the situation evolves. The ideal place can thus shift from home to hospital and back to home again. The decision to change the place of care should be discussed at every stage with parents, physician, nurse and if possible the child itself.*
- *An integrated model of palliative care “in which the components of palliative care are offered at diagnosis and continued throughout the course of illness, whether the outcome ends in cure or death” has to be adopted.*

References

1. Nair MK, Varghese C, Swaminathan R. Cancer: current scenario, intervention strategies and projections for 2015. NCMH Background Papers.
2. Rajagopal MR, Joranson DE. India: Opioid availability - an update. *J Pain Symptom Manage* 2007;33:615-622.
3. American Academy of Pediatrics Committee on Nutrition. The Use and Misuse of Fruit Juice in Pediatrics. *Pediatrics* 2007;119:405.

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4. McGrath PJ, Attitudes and beliefs about medication and pain management in children. *J Palliat Care* 1996;12:46-50.
5. Weissman DE, A faculty development course for end-of-life care. *J Palliat Med* 1998; 35:44.
6. Weissman DE, Griffie J, Integration of palliative medicine at the Medical College of Wisconsin 1990-1996. *J Pain Symptom Manage* 1998; 15:195- 201.
7. www.act.org.in
8. Himelstein BP, Hilden, JM , Boldt AM, Weissman D. Pediatric Palliative Care. *N Engl J Med* 2004;350:1752
9. Fagen TS. Music therapy in the treatment of anxiety and fear in terminal pediatric patients. *Music Therapy* 1982;13:23.
10. McEvoy M. Teesside Hospice and University of Teesside, UK. Development of a new approach to palliative care documentation, *Int J Palliat Nurs* 2000;6:288-297.
11. American Academy of Pediatrics, Committee on bioethics and committee on hospital care. Palliative care for children. *Pediatrics* 2000;106:351-357.
12. Frager G, Palliative care and terminal care of children. *Child Adoles Psychiat Clin North Am* 1997;6:889-909.
13. Deaville J. The Nature of Rural General Practice in the UK- Preliminary Research. Joint report from the Institute of Rural Health and the General Practitioners Committee of the BMA. London: Institute of Rural Health and the General Practitioners Committee of the BMA, 2001.
14. Williams LM, Wilkinson C, Williams LF. General practitioners in North Wales: current experiences of palliative care. *Eur J Cancer Care* 2000; 9: 138-143.

SUPPORTIVE AND PALLIATIVE CARE

PRENATAL PERSPECTIVES IN PALLIATIVE CARE

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Abstract: *Palliative care for neonates is “an entire milieu of care to prevent and relieve infant suffering and improve the conditions of the infant’s living and dying.” In pregnancies with a malformed fetus, the parents and the live born will benefit from early involvement of palliative care professionals. In this article we attempt to discuss the important issues related to the care of a mother carrying a malformed fetus.*

Keywords: *Prenatal conditions, Perinatal palliative care*

Points to Remember

- *Breaking bad news to parents when the fetus is detected to have an anomaly needs skill and compassion.*
- *Counseling parents in the antenatal period must take the prognosis for survival into account.*
- *Physicians must provide adequate information and support to parents so as to help them make appropriate decisions regarding termination of pregnancy.*
- *Parents must receive adequate information about the prognosis of the resuscitation efforts and must receive appropriate emotional support to make decisions.*
- *All babies who need palliative care must be monitored for pain*
- *Social workers, psychologists and volunteers who have been part of the care giving team can play an important role in caring for the bereaved family.*

References

1. EUROCAT Working Group. Eurocat Report 7. Brussels: Scientific Institute of Public Health–Louis Pasteur, 1997;pp50-79.
2. Dastgiri S, Gilmour WH, Stone DH. Survival of children born with congenital anomalies. Arch Dis Child 2003; 88:391–394.
3. Catlin A, Carter B. Creation of a neonatal end-of-life palliative care protocol. J Perinatol 2002; 22:184-195.
4. Field MJ, Behrman RE, eds. In: When Children Die: Improving Palliative and End-of-Life Care for Children and Their Families. For the Institute of Medicine Committee on Palliative and End-of-Life Care for Children and Their Families. Washington, DC: National Academies Press; 2003
5. EUROCAT Working Group. Appendix 7 & Appendix 8 in Report 8: Surveillance of Congenital Anomalies in Europe 1980–99. University of Ulster, 2002.
6. Garne E, Loane M, De Vigan C, Scarano G, Tucker D, Stoll C, et al. Prenatal diagnosis of severe structural congenital malformations in Europe, Ultrasound Obstet Gynaecol, 2005;25: 6-11.

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7. Welch, L, Miller, L, Glob. libr. women's med., (ISSN: 1756-2228)2008; DOI 10.3843/GLOWM.10415
8. Skari H, Mall UF, Biornland K, Egeland T, Haugen G, Skreden M, et al. Prenatal diagnosis of congenital malformations and parental psychological distress - A prospective longitudinal cohort study. *Prenat Diag* 2006;26:1001-1009.
9. Wool C. Systematic review of the literature: parental outcomes after diagnosis of fetal anomaly. *Adv Neonatal Care* 2011;11:182-192.
10. Callister LC. Perinatal loss: A family perspective. *Journal of Perinatal and Neonatal Nursing* 2006;20:227-234.
11. O'Neill B. A father's grief: dealing with stillbirth. *Nurs Forum* 1998;33:33-37.
12. Garne E, Khoshnood B, Loane M, Boyd P, Dolk H. EUROCAT Working Group, "Termination of pregnancy for fetal anomaly after 23 weeks of gestation: a European register-based study". *BJOG* 2010;117:660-666.
13. Calhoun BC, Napolitano P, Terry M, Bussey C, Hoeldtke NJ. Perinatal hospice. Comprehensive care for the family of the fetus with a lethal condition. *J Reprod Med* 2003;48:343-348.
14. Kattwinkel J, Perlman JM, Aziz K, Colby C, Fairchild K, Gallagher J, et al. Neonatal resuscitation: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation* 2010; 122:S909.
15. Jassal SS. Basic symptom control in Paediatric palliative care. In: *The rainbows children's hospice guidelines 7th edn*, BMJ Publishing Group Ltd, London, 2008
16. Doyle D, Hanks G, Cherny NI, Calman K, eds, Bereavement issues and staff support. In: *Oxford Textbook of Palliative Medicine. 3rd Edn*. Oxford University Press; 2004
17. ACT's neonatal care pathway for babies with palliative care needs. <http://www.act.org.uk/page.asp?section=116§ionTitle=ACT>.

SUPPORTIVE AND PALLIATIVE CARE

COMMON PROBLEMS AND THEIR MANAGEMENT IN PEDIATRIC PALLIATIVE CARE

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Abstract: *Today with growing burden of disease and children with terminal illness, there is a pressing need for pediatric palliative care. This is an approach aimed at providing holistic care to children with terminal illnesses and their family. Pediatric palliative care is unique in its approach due to dissimilarity in the presentation of symptoms between children and adults. This review article outlines various salient features of pediatric palliative care which may aid the professionals caring for children with life limiting illnesses.*

Keywords: *Pediatric palliative care, Symptoms.*

References

1. Collins JJ, Byrnes ME, Dunkel IJ, Lapin J, Nadel T, Thaler HT, et al. The Memorial Symptom Assessment Scale (MSAS): validation study in children aged 10-18 years. *J Pain and Symptom Management* 2000;19:363-377.
2. Amerongen AVN, Veernan ECI. Current therapies for xerostomia and salivary gland hypofunction associated with cancer therapies. *Support Care Cancer*. 2003;11: 226-231.
3. Soto E, Fall-Dickson JM, Berger AM. Oral Complications. In: DeVita VT, Lawrence TS, Rosenberg SA, eds. *Cancer: Principles and Practices of Oncology*. 9th edn. Philadelphia, PA: Lippincott Williams & Wilkins; 2011.
4. Pappas PG, Rex JH, Sobel JD, Filler SG, Dismukes WE, Walsh TJ, et al. Guidelines for treatment of candidiasis. *Clin Infect Dis* 2004; 38:161-189.
5. Muckaden MA, Dighe M, Duraiswamy PD, Dhiliwal S, Tilve P, Jadhav S, et al. *Pediatric Palliative Care: Theory to Practice*. *Indian J Palliat Care*. 2011; 17(Suppl): S52-S60.
6. Cole RM, Robinson F, Harvey L, Trethowan K and Murdoch V. Successful control of intractable nausea and vomiting requiring combined ondansetron and haloperidol in a patient with advanced cancer. *J Pain Symptom Manage*. 1994;9:48-50.
7. Karwacki MW. Gastrointestinal symptoms. In: Goldman A, Hain R and Liben S, eds. *Oxford textbook of Palliative Care for Children*. 1st edn. Oxford University Press; London, 2004;pp28-31.
8. Lembo A, Camelleri M. Chronic Constipation. *N Engl J Med* 2003;349:1360-1368.
9. Parrish CR. Opioid analgesia and gastrointestinal tract. *J Pract gastroentrol* 2008;364:37-50.
10. Coats AJ. Origin of symptoms in patients with cachexia with special reference to weakness and shortness of breath. *Int J Cardiol*. 2002;85:133-139.
11. Azcona C, Castro L, Crespo E, Jiménez M, Sierrasesúmaga L. Megestrol acetate therapy for anorexia and weight loss in children with malignant solid tumours. *Aliment Pharmacol Ther*. 1996;10:577-586.
12. Mantovani G, Macciò A, Massa E, et al. Managing cancer-related anorexia/cachexia. *Drugs* 2001; 61: 499-514.
13. Couluris M, Mayer JLR, Freyer DR, Sandler E, Ping Xu, and Krischer JP. The effect of cyproheptadine hydrochloride and megestrol acetate on weight in children with cancer/treatment-related cachexia. *J Pediatr Hematol Oncol*. 2008;30: 791-797.
14. Wolfe J, Grier HE, Klar N, Levin SB, Ellenbogen JM, Salem-Schatz S, et al. Symptoms and sufferings at the end of life in children with cancer. *N Engl J Med* 2000; 342:326-333.
15. Liben S, Hain R and Goldman A. Respiratory Symptoms. In: Goldman A, Hain R, Liben S, eds. *Oxford textbook of Palliative Care for Children*. 1st Edn. Oxford University Press; London, 2006;pp32-47.
16. Allard P, Lamontagne C, Bernard P et al. How effective are supplementary doses of opioids for dyspnoea in terminally ill cancer patients? A randomized continuous sequential clinical trial. *J Pain Symptom manage* 1999;17:256-265.

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SUPPORTIVE AND PALLIATIVE CARE
PAIN MANAGEMENT IN PALLIATIVE CARE

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Abstract: *Palliative care for children is the active total care of the child's body, mind and spirit and also involves giving support to the family. It begins when illness is diagnosed and continues regardless of whether or not a child receives treatment directed at the disease. Health providers must evaluate and alleviate a child's physical, psychological and social distress. This article narrates an overview of paediatric pain in brief.*

Keywords: *Palliative care, Pediatric pain, Pain assessment, Children.*

Points to Remember

- *Palliative care in pediatric setting should begin right from the diagnosis of the illness and continue through the course of the disease.*
- *Palliative care should be instituted with appropriate drugs and other supportive measures as pain may make the child noncompliant to treatment and the parents to lose their trust in the treating personnel.*
- *Inadequate relief of pain has been found to lead onto post traumatic stress disorder, depression and stress even years after treatment.*
- *Clinicians often have misconceptions regarding the ability of children to perceive pain and to understand the nature and extent of pain completely.*
- *Pain is often undertreated in children due to fear of addiction to opioids and misconceptions regarding opioid usage and ignorance regarding pharmacodynamics and dosage of opioids leads to their inadequate and improper usage.*
- *Health professionals dealing with paediatric malignancies often lack knowledge regarding simple cognitive, behavioural and supportive techniques for pain management.*

References

1. Wolfe J, Klar N, Grier HE, Duncan J, Salem-Schatz S, Emanuel EJ, et al. Understanding of prognosis among parents of children who died of cancer: impact on treatment goals and integration of palliative care. *JAMA*. 2000;284:2469–2475.
2. Cancer pain relief and palliative care in children WHO 1998 [www.whocancer.org/pain.wisc.edu/Index/Volume 12, No.1-1999](http://www.whocancer.org/pain/wisc.edu/Index/Volume%2012/No.1-1999).
3. American Academy of Pediatrics. Committee on Bioethics and Committee on Hospital Care. Palliative care for children. *Pediatrics* 2000;106 (2 Pt 1):351–335
4. Pain management in child with cancer. Texas cancer council. 1999 www.childcancerpain.org
5. Anand KJ. Clinical importance of pain and stress in preterm neonates. *Biol Neonate*, 1998;73: 1-9.
6. Acute Pain Management: Operative or Medical Procedures and Trauma, Clinical Practice Guideline No. 1. AHCPR

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7. Hockenberry MJ, Wilson D: In: Wong's Essentials of Pediatric Nursing, 8th Edn, St. Louis: Mosby 2009; pp911-948.
8. Validation of World Health Organization Guidelines for cancer pain relief: a 10-year prospective study. *Pain* 1995;63:65-76.
9. Geeta MG, Geetha P, Ajithkumar VT, Krishnakumar P, Kumar KS, Mathews L. Management of pain in leukemic children using the WHO analgesic ladder. *Indian J Pediatr* 2010 Jun;77(6):665-8. Epub 2010 Mar 31.
10. Role of the selective cyclo-oxygenase-2 (COX-2) inhibitors in children Sean Turner, Violet Ford *Arch Dis Child Educ Pract Ed* 2004; 89:ep46-ep49.
11. Dickens DS, Kozielski R, Khan J, Forus A, Cripe TP. Cyclooxygenase-2 expression in pediatric sarcomas. *Pediatr Dev Pathol* 2002;5:356–364.
12. Leahy S, Hockenberry-Eaton M, Sigler-Price K. Clinical management of pain in children with cancer: selected approaches and innovative strategies. *Cancer Practice* 1994;2:37-45.
13. Himmelstein BP, Hilden JM, Boldt AM, Weissman D. Pediatric palliative care. *N Engl J Med* 2004 22;350:1752–1762.
14. Broome ME, Rehwaldt M and Fogg L . Relationships between cognitive behavioural techniques, temperament, observed distress, and pain reports in children and adolescents during lumbar puncture. *J Pediatr Nurs* 1998;13:48-54.
15. LK Zelter, et al Report of the Subcommittee on the Management of Pain Associated with Procedures in Children with Cancer. *Pediatrics* 1990;86:827.

SUPPORTIVE AND PALLIATIVE CARE
METAPHORS AND BEYOND: A JOURNEY OF HEALING USING ART AND PLAY BASED INTERVENTIONS

***Chopra R**

Abstract: *Palliative care for children goes beyond just pain control and symptom management. It is a holistic model that also caters to the psychosocial aspects of the patient, their relationships, hopes, fears and wishes. Children seldom talk about their experiences, reactions, perceptions, feelings, wishes, wants or needs like adults do. Play is considered to be the natural language of a child. The symbolic language of play often reveals the child's inner world. This understanding can help the professionals to facilitate communication between parents and the dying child and thereby promote healing during the dying process.*

Keywords: *Childhood cancer, Play/art therapy, Healing, Psychosocial*

Points to Remember

- *Only trained professionals should initiate play and arts based therapy with children.*
- *The act of simply having toys available for your clients or involving them in drawing does not mean that they are receiving (or that you are practicing) play therapy or art therapy.*
- *Change does not happen overnight. The process of therapy is more important than the outcome.*
- *There is no prescribed list of the materials/toys kept in the play therapy room. The choice of play materials has to be carefully done as some clients might be averse to some specific items.*
- *Even the sickest child can be helped to play.*

References

1. Varni JW, Blount RL, Quiggins DL. Oncologic disorders. In: Handbook of Pediatric Psychology and Psychiatry. Allyn & Bacon; Needham Heights, MA: 1998,pp313–346.
2. Bjork M, Wiebe T, Hallstrom I. Striving to survive: families' lived experiences when a child is diagnosed with cancer. *J Pediatr Oncol Nurs* 2005; 22: 265-275.
3. Wolfe JG, Grier HE, Klar N, Levin SB, Ellenbogen JM, Salem-Schatz S., et al. Symptoms and suffering at the end of life in children with cancer. *J Am Med Assoc* 2000; 342:326-333.
4. Holyoake D. Reflections on the process of play interaction. *Paediatr Nurs* 1998; 24: 14-17.
5. Petrillo M, Sanger S. Emotional care of hospitalized children 2nd edn. Lippincott; Philadelphia, 1980.
6. Prugh D. Investigations dealing with reactions of children and families to hospitalization and illness. Emotional problems of early childhood. Basic Books; New York: 1995.
7. Rie HE., Boverman H, Grossman BJ, Ozoa N. Immediate and long-term effects of interventions early in prolonged hospitalization. *Pediatrics* 1968; 41: 755-764.
8. Thompson R, Stanford G. Child life in hospital: Theory and practice. Charles C. Thomas; Springfield, IL: 1981
9. Ewing B. Wish fulfillment for children with life-threatening illnesses [Monograph]. In *Meaning in suffering: Caring practices in healthcare and the human sciences*. Vol. 6 University of Wisconsin Press; Madison: 2007;pp186-231.

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10. Davies B, Collins JB, Steele R, PipkeI, Cook K. The impact on families of a children's hospice program. *J Palliat Care* 2005; 19;:15-26.
11. Kübler-Ross, E. *On children and death*. Collier Books; New York: 1983.
12. Rye N. (2012). Child-centred play therapy. In: JH Stone, M Blouin, editors. *International Encyclopaedia of Rehabilitation*. <http://cirrie.buffalo.edu/encyclopedia/en/article/275>.
13. A Total Approach: Play Therapy <http://www.atotalapproach.com/docs/play-therapy.pdf>.
14. Fifteen Effective Play Therapy Techniques *Professional Psychology: Research and Practice* 2002; 33; : 515-522.
15. O'Connor KJ, Schaefer CE, eds. *The Color-Your-Life technique: Handbook of play therapy*. New York: John Wiley and Sons; 1983;pp 251-258.
16. Waller D. Art therapy for children- How it leads to change. *Clinical Child Psychology and Psychiatry*, 2006; 11: 271-282.
17. Nainis N, Paice AJ, Ratner J, Wirth JH, Lai J, Shott S. Relieving Symptoms in Cancer: Innovative Use of Art Therapy. *Journal of Pain and Symptom Management*. 2006; 31: 162-169.
18. Malchiodi C. *Medical art therapy with adults*. London: Jessica Kingsley, 1999.
19. Michael G. Art therapy as an intervention to stabilize the defenses of children undergoing bone marrow transplantation. *The Arts in Psychotherapy* 2000; 27:3-14.
20. Cox CT. The MARI Assessment. In:Malchiodi CA *Handbook of Art Therapy*. New York: Guilford press; 2003.
21. Malchiodi CA. *The Art Therapy Sourcebook*. New York: McGraw Hill; 2007.
22. *Mandala Coloring For Children And Teenagers With Cancer*. 2013, cited from <http://www.montyscorner.org/content/mandala-coloring-children-and-teenagers-cancer>.
23. Notter L.E., Hott J.R. *Essentials of nursing research*. Springer Publishing Company; New York: 1994.
24. Carlson R., Arthur N. Play therapy and the therapeutic use of story. *Can J Couns* 1999; 33: 212-226.
25. Carroll J. Play therapy: the children's views. *Child & Family Social Work* 2002;7:177-187.
26. Winnicott D.W. *Playing and reality*. Pelican Books; London: 1988.
27. Piaget J. *The Language and thought of the child*, 3rd edn. Routledge Kegan Paul; Boston: 2001.
28. Schaub B G., Dossey B M. Imagery: Awakening the inner healer. In *Holistic nursing: A handbook for nursing practice*, 4th edn. Jones and Bartlett; Boston: 2005;pp 5-30.
29. Skybo T, Ryan-Wenger NR., Su Y. Human figure drawings as a measure of children's emotional status: Critical review for practice. *J Pediatr Nurs* 2007; 22: 15-28.
30. Rollins J. A. Tell me about it: drawing as a communication tool for children with cancer. *J Pediatr Oncol Nurs* 2005; 22:203-221.
31. Wikström B.M. Communicating via Expressive Arts: The natural medium of self-expression for hospitalized children. *Paediatr Nurs* 2005;31:480-485.

SUPPORTIVE AND PALLIATIVE CARE

NUTRITION IN PALLIATIVE CARE

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Abstract: *Nutritional support forms one of the essential adjuncts along with other measures of palliative care. To plan for proper nutrition of patients on palliative care, we need to assess degree of nutritional deficiency, type, quality of nutrients and decide about the mode of administration. The nutritive values of food items, various routes of feeding, their indications, advantages, etc are discussed in this article.*

Keywords: *Nutrition, Palliative care, Children*

Points to Remember

- *Dietetic management is an essential part of palliative care.*
- *Among various routes of feeding oral route is the simplest, cheapest and most physiological one.*
- *Factors apart from illness to be considered to influence nutrition are preference of children, parents and relatives and pleasant environment.*

Bibliography

1. Marrelli TM, ed, Hospice and Palliative care Handbook. Quality, Compliance and Reimbursement (Paperback). 2nd edn, Elsevier science health science div. 2004.
2. Doyle, Hanks and McDonald, eds, Oxford Textbook of Palliative Medicine: 2nd Edn, London, 2002.
3. John G Miosley, ed, Palliation in Malignant Diseases: Churchill Livingstone, Edinburgh, 1988.
4. www.eapc.net.org

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SUPPORTIVE AND PALLIATIVE CARE

DEVELOPMENTALLY APPROPRIATE COUNSELING NEEDS IN PEDIATRIC PALLIATIVE CARE

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****Sovani A**

Abstract: *Aim and objectives: This paper aims to discuss and highlight the need for developmentally and age appropriate counseling for children and adolescents. Case studies are used as a qualitative tool to understand issues that need age appropriate counseling intervention for children facing advanced life threatening illness. Key issues regarding comprehension of their condition and coping devices to handle the resultant emotions are presented. The need for age appropriate developmental counseling is highlighted. Case studies are used to illustrate the child's understanding of his/her condition and the counselor's understanding of the latter.*

Keywords: *Cancer, Palliative care, Developmentally appropriate counseling.*

Points to Remember

- *The role of palliation needs to be explained to parents. The aim is management of symptoms and not disease cure, since the latter is no longer feasible.*
- *The goal is of building up a relationship, rapport and trust with patient and families, leading to their empowerment and improved compliance.*
- *Unforeseen occurrence of emergency may be there and false hope is not given.*

- *For younger, less verbal children, therapeutic intervention in the form of play, art, craft, drawing, picture, stories and narrations of illness trajectory can be helpful and the same can be taught to parents.*
- *Older children may wish to be partners in disclosure and care and exert autonomy of choice of place to live.*
- *Innate resilience of children and adolescents is apparent, often more so in India where fatalistic attitudes are often engendered by the culture and spiritual outlook. In India many children grow up and mature to shoulder familial burden of survival.*

References

1. Global cancer facts and figures, www.cancer.org/acs/groups/content/document/acspc-027766.pdf.
2. Srikala Bharat. Psycho social aspects of cancer in children. In: Psycho-Oncology Current Issues, eds Prabha Chandra, Santosh Chaturvedi, National Institute of Mental Health & Neurosciences (NIMHANS) Bangalore India, 1998;p123.
3. Yin, K. Case Study Research: Design and Methods. 4th edn. California: SAGE Publications, 2009.
4. Etherington, K.(ed). Counseling children and their families in Intensive care In: Counsellors in Health settings. Jessica Kingsley Publishers, Philadelphia 2001;p123.
5. Till, Tracy Coping with Cancer: The Adolescent Experience. Master Thesis Australian Catholic University Research Services, 2004;p3.
6. Mehra, Gayatri Sovani, Anuradha. An exploration of death images in children. Disabilities and Impairments 1997;11:103-112.
7. Parkar M. Children with Cancer In: A Handbook for Families and Helpers, Macmillan Publishing Co, Inc, New York. 1979;p111.

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SUPPORTIVE AND PALLIATIVE CARE

COMPLIMENTARY AND ALTERNATIVE THERAPY - YOGA IN PALLIATIVE CARE

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Abstract: *Yoga is an ancient Indian practice of healing mind, body and soul. Today, yoga has become one of the popular areas of research and is being effectively used as a component of Alternative and Complimentary Practice of palliative care for many ailments. What is unique about the practice of yoga is that it is not confined in its application and people from all age-group can benefit from it. In the recent years, with its wide application in the field of education and health, yoga has become an integral part of learning and practice in children's lives and recent research focuses on studying beneficial effects of yoga on children.*

Keywords: *Yoga, Children, Cancer, Alternative and Complimentary Medicine, Mindfulness Meditation.*

Points to Remember

- *Yoga, an Indian body of knowledge is widely used and practiced around the globe to achieve mind-body balance, spiritual awakening and healing.*
- *The therapeutic powers of yoga are integrated with modern medicine today and it is suggested that it is very effective in providing comfort and in some cases cure, to the patients with various ailments and life-threatening illnesses.*
- *Yoga is beneficial for everyone be it children, young adults or senior citizens.*
- *Yoga is evolving as an adjunct to healing practice and there is great scope for research in this area especially to understand its effects among children and adolescents suffering from life-threatening illnesses.*

- *There are Children Cancer Hospitals in the US who have adopted yoga practice and offer it to their pediatric patients.*
- *“Mindfulness Meditation- a mind-body intervention” is studied and being used in pediatric clinical practice today.*

References

1. Edelblute J. Pediatric oncology patients find help and hope in New York City. *Altern Ther Health Med* 2003;9(2):106-107.
2. Thygeson MV, Hooke MC, Clapsaddle J, Robbins A, Moquist K (2010). Peaceful play yoga: Serenity and balance for children with cancer and their parents. *Journal of Pediatric Oncology Nursing*, 27(5), 276–284. doi:10.1177/1043454210363478 retrieved from <http://amacf.org/2013/03/children-with-cancer-and-their-parents-benefits-of-yoga/>
3. Shaynebance, History of yoga - A complete overview of the yoga history [Internet] available from <http://www.abc-of-yoga.com/beginnersguide/yogahistory.asp>
4. The health benefits of yoga [Internet] available from <http://www.webmd.com/balance/guide/the-health-benefits-of-yoga>.
5. Flisek L. Teaching yoga to young school children. *Positive Health Onl* 2001;70:50-54.
6. White LS. Yoga for children. *Pediatr Nurs* 2009;35(5):277-83, 295.
7. Greene J. Circle of life awards 2004. *Hospitals & Health Networks* 2004;78 (8):48-50, 2. Available from: Proquest
8. Carolyn O. Cantu, MS, OTR. We need evidence for yoga in paediatrics. Available from: <http://occupational-therapy.advanceweb.com/Article/We-Need-Evidence-for-Yoga-in-Pediatrics.aspx>
9. Ott MJ. Mindfulness meditation in pediatric clinical practice. *Pediatr Nurs* 2002;28(5):487-90.

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GENERAL ARTICLES

SYNCOPE IN CHILDREN***Chokhani Rajesh R**

Abstract: *Syncope is not uncommon in children. Since the list of causes is large, a sound clinical approach is necessary to effectively separate out syncope from its mimics, and then zero down on the probable diagnosis. While vasodepressor syncope is the commonest and benign, it is crucial to identify potentially life threatening cardiac syncope as well. This article attempts to outline a practical approach, which on one hand limits unnecessary investigations, while on the other, effectively screens for serious disorders.*

Keywords: *Syncope, Pediatric, Vasodepressor, Cardiac*

Points to Remember

- *A detailed history and a thorough physical examination is the most important initial evaluation in children with syncope*
- *Vasodepressor syncope is the commonest type of pediatric syncope that is diagnosed by its classical history.*
- *Evaluation of pediatric syncope should be able to identify cardiac syncope which is potentially dangerous; an ECG, along with the history and physical examination, has a 96% sensitivity in picking up cardiac syncope.*
- *A long list of aimless investigations may not be useful.*
- *The mainstay of treatment of vasodepressor syncope is largely reassurance and general non pharmacologic measures; drugs are only occasionally used in cases of recurrent syncope.*

References

1. Fischer JW, Cho CS. Pediatric syncope: Cases from the Emergency Department. *Emerg Med Clin North Am* 2010;28:501-516.
2. Tanel RE, Walsh EP. Syncope in the pediatric patient. *Cardiol Clin* 1997;15: 277–294.
3. Johnsrude CL. Current approach to pediatric syncope. *Pediatr Cardiol* 2000; 21:522–531.
4. Goble MM, Benitez C, Baumgardner M, Fenske K. ED management of pediatric syncope: searching for a rationale. *Am J Emerg Med.* 2008; 26: 66-70.
5. Kuriachan V, Sheldon RS, Platonov M. Evidence-based treatment for vasovagal syncope. *Heart Rhythm* 2008; 5:1609-1614.
6. Venugopal D, Jhanjee R, Benditt DG. Current management of syncope: focus on drug therapy. *Am J Cardiovasc Drugs* 2007;7:399-411.
7. Gupta AK, Maheshwari A, Lokhandwala Y. Evaluation of syncope: an overview. *Indian Pacing Electrophysiol J* 2001;1:12-22.

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GENERAL ARTICLES

NUTRITIONAL DEFICIENCIES IN NORMALLY GROWING CHILDREN

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Abstract: *Nutritional deficiencies are common in the pediatric population specially among impoverished populations. This is more so among growing children. Overt nutritional deficiencies are well known to all; however subclinical deficiencies in normally growing children are difficult to assess and treat. This article focuses on the common nutritional deficiencies seen in normally growing children with special reference to Indian population.*

Keywords: *Nutritional deficiency, Normal growth, Children*

Points to remember

- *Nutritional deficiencies are common in children.*
- *In normally growing children it is important to diagnose various deficiencies specially when manifestations of deficiencies are not overt.*

References

1. National Center for Health Statistics. Plan and Operation of the Third National Health and Nutrition Examination Survey (NHANES III), 1988-1994. Hyattsville, MD: National Center for Health Statistics; 1994.
2. Looker AC, Dallman PR, Carroll MD, Bunter EW, Johnson CL. Prevalence of iron deficiency in the United States. JAMA. 1997; 277:973-976.
3. Oski FA. Iron deficiency in infancy and childhood. N Engl J Med. 1993; 329:190-193.
4. Halterman JS, Kaczorowski JM, Aligne CA, Auinger P, Szilagyi PG. Iron deficiency and cognitive achievement among schoolaged children and adolescents in the United States. Pediatrics. 2001; 107:1381-1386.
5. Ullrich C, Wu A, Armsby C, Rieber S, Wingerter S, Brugnara C et al. Screening healthy infants for iron deficiency using reticulocyte hemoglobin content. JAMA 2005; 294:924-930.
6. Maguire JL, de Veber G, Parkin PC. Association Between Iron-Deficiency Anemia and Stroke in Young Children. Pediatrics 2007; 120:1053-1057
7. Dube K, Schwartz J, Mueller MJ, Kalhoff H, Kersting M. Iron intake and iron status in breastfed infants during the first year of life. Clinical Nutrition (2010), doi:10.1016/j.clnu.2010.05.002
8. Robinson PD, Hogler W, Craig ME, Verge CF, Walker JL, Piper AC et al. Arch Dis Child 2006; 91:564-568.
9. Mehrotra P, Marwaha RK, Aneja S, Seth A, Singla BM, Ashraf G. Hypovitaminosis D and Hypocalcemic Seizures in Infancy. Indian Pediatr 2010; 47:581-586.
10. Sachan A, Gupta R, Das V, Agarwal A, Awasthi PK, Bhatia V. Am J Clin Nutr 2005; 81:1060-1064.
11. Jain V, Gupta N, Kalaivani M, Jain A, Sinha A, Agarwal R. Vitamin D deficiency in healthy breastfed term infants at 3 months & their mothers in India: Seasonal variation & determinants. Indian J Med Res 2011; 133:267-273.
12. Shah BR, Finberg L. Single-day therapy for nutritional vitamin D-deficiency rickets: a preferred method. J Pediatr 1994; 125:487-490.
13. Thacher TD, Fischer PR, Pettifor JM, et al. A comparison of calcium, vitamin D, or both for nutritional rickets in Nigerian children. N Engl J Med 1999; 341:563-568.
14. San Sebastian M, Jativa R. Beriberi in a well nourished Amazonian population Acta Trop 1998; 70:193-196.
15. Michele Gagnolati, Meera Shekar, Monica Das Gupta, Caryn Bredenkamp and Yi-Kyoung Lee. India's undernourished children: a call for reform and action. Health, Nutrition and Population (HNP) Discussion Paper. August 2005.

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GENERAL ARTICLES

ANTIEMETICS IN PEDIATRICS***Jeesson C Unni**

Abstract: *A consensus on the indications for the use of antiemetics in children needs to be formulated as most drugs under this drug class have side effects and most common causes of vomiting in children do not require medication for control of emesis. This article is an attempt to resolve certain issues related to the use of antiemetics in children.*

Keywords: *Antiemetics, Cytotoxic drugs, Chemotherapy, Post operative vomiting, Acute gastroenteritis, Motion sickness, Phenothiazines, 5-HT₃ antagonists.*

Points to Remember

- *Prescribe an antiemetic only when the cause of vomiting is known, as it might otherwise delay diagnosis.*
- *In certain conditions antiemetics are unnecessary and sometimes harmful when the cause can be otherwise treated such as in diabetic ketoacidosis, or in digoxin or antiepileptic overdose.*
- *In conditions where drug treatment is indicated for control of nausea and vomiting, drug appropriate for the etiologic needs to be chosen.*

References

1. American Academy of Pediatrics, Provisional Committee on Quality Improvement, Subcommittee on Acute Gastroenteritis, Practice parameter: the management of acute gastroenteritis in young children. *Pediatrics* 1996; 97: 424-435.
2. Drugs used in nausea and vertigo. BNF for children. 2005. BMJ Publishing Group Ltd. London. 2005; pp 215-217.
3. Schnabel A, Eberhart LH, Muellenbach R, Morin AM, Roewer N, Kranke P. Efficacy of perphenazine to prevent postoperative nausea and vomiting: a quantitative systematic review. *Eur J Anaesthesiol* 2010; 27(12): 1044-51. doi: 10.1097/EJA.0b013e32833b7969.
4. Jordan K, Roila F, Molassiotis A, Maranzano E, Clark-Snow RA, Feyer P; MASCC/ESMO. Antiemetics in children receiving chemotherapy. MASCC/ESMO guideline update 2009. *Support Care Cancer* 2011; 19 Suppl 1: S37-42. doi: 10.1007/s00520-010-0994-7.
5. Leary PM. Adverse reactions in children. Special considerations in prevention and management. *Drug Saf* 1991; 6: 171-182.
6. Engelman E, Salengros JC, Barvais L. How much does pharmacologic prophylaxis reduce postoperative vomiting in children? Calculation of prophylaxis effectiveness and expected incidence of vomiting under treatment using Bayesian meta-analysis. *Anesthesiology* 2008; 109: 1023-1035. doi: 10.1097/ALN.0b013e31818d6b26.
7. Büttner M, Walder B, von Elm E, Tramèr MR. Is low-dose haloperidol a useful antiemetic?: A meta-analysis of published and unpublished randomized trials. *Anesthesiology* 2004; 101: 1454-1463.

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8. Prescribing in palliative care. BNF for children. 2005. BMJ Publishing Group Ltd. London. 2005;pp23-29.
9. Singhi SC, Shah R, Bansal A, Jayashree M. Management of a Child with Vomiting. *Indian J Pediatr* 2013 Jan 23. [Epub ahead of print].
10. Park YH, Jang YE, Byon HJ, Kim JT, Kim HS. Comparison of the efficacy of ramosetron and ondansetron in the prophylaxis of postoperative vomiting in children receiving fentanyl by patient-controlled analgesia after orthopedic surgery: a randomized controlled trial. *Paediatr Anaesth* 2013; 23(4): 360-364. doi: 10.1111/pan.12103.
11. Manteuffel J. Use of antiemetics in children with acute gastroenteritis: Are they safe and effective? *J Emerg Trauma Shock* 2009; 2(1): 3–5. doi: 10.4103/0974-2700.44674.
12. Todaro B. Cannabinoids in the treatment of chemotherapy-induced nausea and vomiting. *J Natl Compr Canc Netw* 2012; 10(4): 487-492.
13. Bsat FA, Hoffman DE, Seubert DE. Comparison of three outpatient regimens in the management of nausea and vomiting in pregnancy. *J Perinatol* 2003; 23: 531-535.
14. Spinks A, Wasiak J. Scopolamine (hyoscine) for preventing and treating motion sickness. *Cochrane Database Syst Rev* 2011; (6): CD002851. doi:10.1002/14651858.CD002851.pub4.
15. IAP Pediatric Drug Formulary 2012 with IAP recommendations on drug therapy for pediatric illnesses. Eds Unni JC, Nair MKC, Menon PSN, Bansal CP. 3rd edn. Pixel studio, Cochin.

DERMATOLOGY

IMMUNOBULLOUS DISEASES IN CHILDREN

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Abstract: Auto immune blistering disorders are heterogeneous group of diseases that result from auto antibodies generated against target antigens found in the skin and mucous membranes. This process leads to a variety of disruptions in keratinocyte adhesion and cellular integrity, resulting in fluid accumulation and development of blisters. Physicians should have an appreciation and understanding of autoimmune blistering disorders in the pediatric population when formulating a differential diagnosis of a patient who presents with skin blistering. Early detection and discrimination between the varied autoimmune blistering disorders can change the course of treatment and outcome. Due to the similarity in clinical presentation among different diseases within this category, histopathologic evaluation and, especially, immunofluorescence studies are necessary to establish the definitive diagnosis.

Keywords: Immunobullous diseases, Children

Points to Remember

- *Immunobullous disorders in children, though rare are not infrequent.*
- *High index of suspicion will help early diagnosis and management. Steroids form the main stay in pemphigus group of diseases with or without another immune suppressant.*
- *Pulse therapy of steroid when administered carefully gives better results with lesser side effects. Pemphigoid has a relatively better prognosis when compared to pemphigus and hence can be treated with steroid alone.*
- *Dapsone is the drug of choice in CBDC and bullous SLE. Other drugs like IV Ig and biologic agents should be used only in selected cases where the other drugs fail.*

References

1. De D, Kanwar AJ. Childhood pemphigus. Indian J Dermatol 2006; 51:89-95.
2. Hamann ID, Hepburn NC, Hunter JA. Chronic bullous dermatosis of childhood: relapse after puberty. J R Soc Med. 1995; 88: 296P-297P.
3. Madhani NA, Khan KJ. Linear IgA bullous dermatosis of childhood: Response to thalidomide. Indian J Dermatol Venereol Leprol 2010;76:427-429.
4. Morelli JG, Weston WL. Childhood immunobullous disease following a second organ transplant. Pediatr Dermatol. 1999;16:205-207.
5. Trüeb RM, Didierjean L, Fellas A, Elias A, Borradori L. Childhood bullous pemphigoid: Report of a case with characterization of the targeted antigens. J Am Acad Dermatol 1999;40:338-344.
6. Daneshpazhooh M, Shahdi M, Aghaeepoor M, Hasiri G, Chams C. A comparative study of antibody titers of blister fluid and serum in patients with subepidermal immunobullous diseases. Int J Dermatol May 2004;43(5):348-51. [Medline].
7. Fujimoto W, Hamada T, Yamada J, Matsuura H, Iwatsuki K. Bullous Systemic Lupus Erythematosus as an Initial Manifestation of SLE. J Dermatol Dec 2005;32(12):1021-7. [Medline].

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8. Malcangi G, Brandozzi G, Giangiacomini M, Zampetti M, Danieli MG. Bullous SLE: response to methotrexate and relationship with disease activity. *Lupus*. 2003;12(1):63-6. [Medline].
9. Hamminga EA, Vermeer MH. Bullous systemic lupus erythematosus responding to mycophenolatemofetil. *Eur J Dermatol* 2010;20(6):844-5. [Medline].
10. Alsanafi S, Kovarik C, Mermelstein AL, Werth VP. Rituximab in the treatment of bullous systemic lupus erythematosus. *J Clin Rheumatol* 2011;17(3):142-4. [Medline].

CASE STUDY

LYMPHADENOPATHY - A DIAGNOSTIC CHALLENGE

***Vijayasekaran D**
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Abstract: *Chronic lymphadenopathy in children can sometimes be diagnostic dilemma. A seven year old female child presented with isolated left sided posterior cervical lymphadenopathy. Investigations for tuberculosis and lymphoma were negative. Histopathology helped to arrive at the rare diagnosis of Kikuchi -Fujimoto disease.*

Keywords: *Lymphadenopathy, Kikuchi Fujimoto disease, Children*

References

1. Kuo TT. Kikuchi's disease (histiocytic necrotizing lymphadenitis). A clinicopathologic study of 79 cases with an analysis of histologic subtypes, immunohistology, and DNA ploidy. *Am J Surg Pathol* 1995;19:798-809
2. Kikuchi M. Lymphadenitis showing focal reticulum cell hyperplasia with nuclear debris and phagocytes: a clinicopathological study. *Acta Hematol Jpn* 1972;35:379-380.
3. Fujimoto Y, Kozima Y, Yamaguchi K. Cervical subacute necrotizing lymphadenitis: a new clinicopathologic entity. *Naika* 1972;20:920-927.
4. Hassan M, Aneesa A, Zaheera S. Kikuchi-Fujimoto Disease: Diagnostic Dilemma and the Role of Immunohistochemistry. *J Clin Med Res* 2009;1:244-246.
5. El-Ramahi KM, Karrar A, Ali MA. Kikuchi disease and its association with systemic lupus erythematosus. *Lupus* 1994;3:409-411.
6. Bosch X, Guilabert A, Miquel R, Campo E. Enigmatic Kikuchi-Fujimoto disease: a comprehensive review. *Am J ClinPathol* 2004;122:141-152.
7. Sato Y, Kuno H, Oizumi K. Histiocytic necrotizing lymphadenitis (Kikuchi's disease) with aseptic meningitis. *J Neurol Sci* 1999;163:187-191.
8. Sharma OP. Unusual systemic disorders associated with interstitial lung disease. *Curr Opin Pulm Med* 2001;7:291-294.
9. Poulouse V, Chiam P, Poh WT. Kikuchi's disease: a Singapore case series. *Singapore Med J* 2005;46:229-232.
10. Kuo TT. Cutaneous manifestation of Kikuchi histiocytic necrotizing lymphadenitis. *Am J Surg Pathol* 1990; 14: 872-876.
11. Lin HC, Su CY and Huang SC. Kikuchi's Disease in Asian Children. *Pediatrics* 2005; 115:e92. DOI: 10.1542/peds.2004-0924. Accessed from pediatrics.aappublications.org 6.9.11.
12. Proytcheva M. Reactive lymphadenopathies. *Diagnostic Pediatric Hematopathology*. Cambridge University Press, 2011.170-173.
13. Sumiyoshi Y, Kikuchi M, Takeshita M, Oshima.K, Masuda.Y. Immunohistologic studies of Kikuchi disease. *Human pathol*1993;24:1114-1119.
14. Bosch X and Guilabert A. Kikuchi-Fujimoto disease. *Orphanet J Rare Dis* 2006;1:18. Accessed on 3.10.11
15. Jang YJ, Park KH, Seok HJ. Management of Kikuchi's disease using glucocorticoid. *J Laryngol Otol* 2000;114:709-711.
16. Brian J. Baumgartner, Eric R. Helling . Kikuchi's disease: A case report and review of the literature. *Ear, Nose & Throat Journal / May, 2002*. FindArticles.com. 14 Oct, 2011.
17. Martínez-Vázquez C, Hughes G, Bordon J, Alonso-Alonso J, Anibarro-García A, Redondo-Martínez E, Touza-Rey F. Histiocytic necrotizing lymphadenitis, Kikuchi-Fujimoto's disease, associated with systemic lupus erythematosus. *QJM*. 1997;90:531-533.
18. Consensus statement on childhood tuberculosis. Working group on childhood tuberculosis, Indian Academy of Tuberculosis. *Indian Pediatr* 2010;47:41-53.

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CASE STUDY

GANGLIONEUROBLASTOMA PRESENTING AS VERNER MORRISON SYNDROME

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Abstract: *Ganglioneuroblastoma secreting vasoactive intestinal polypeptide and manifesting as a triad of watery diarrhea, hypokalemia and achlorhydria (WDHA) or Verner Morrison syndrome (VMS) is a rare entity. We report a 4 year old boy with recurrent watery diarrhea and hypokalemia diagnosed as VIP secreting ganglioneuroblastoma with complete resolution of symptoms following surgery and on regular follow up.*

Keywords: *Ganglioneuroblastoma, VIP, Watery diarrhea, Verner Morrison syndrome.*

References

1. Samal SC, Paul AC, Venkateswari S, Nair S, Venkatramani S, Perakath B, et al. Vipoma of pancreas in a child. Indian J Gastroenterol; 2000; 19: 194-195.
2. Verner JV, Morrison AB. Islet cell tumor and a syndrome of refractory watery diarrhea and hypokalemia. Am J Med. 1958; 25:374-380.
3. Swift PG, Bloom SR, Harris F. Watery diarrhea and ganglioneuroma with secretion of vasoactive intestinal peptide. Arch Dis Child. 1975; 50: 896-899.
4. Zhang WQ, Liu JF, Zhao J, Zhao SY, Xue Y. Tumor with watery diarrhea, hypokalemia in a 3-year-old girl. Eur J Pediatr 2009; 168:859-862.
5. Smelka RC, Custodio CM, Cem Balci N, Woosley JT. Neuroendocrine tumors of the pancreas: Spectrum of appearance on MRI. J of Magnet Resonance Imaging, 2000; 11:141-148.
6. Natanzi N, Amini M, Yamini D, Nielsen S, Ram R. Vasoactive Intestinal Peptide Tumor. Review Article, Scholarly Research Exchange Volume 2009. Article ID 938325. doi:10.3814/2009/938325.
7. Hamilton JR, Radde I C, Johnson G. Diarrhea associated with adrenal ganglioneuroma; new findings related to pathogenesis of diarrhea. Am J Med, 1968; 44: 453-463.
8. Bourdeaut F, De Carli E, Timsit S, Coze C, Chastagne P, Sarnacki S, et al. VIP hypersecretion as Primary or Secondary Syndrome in Neuroblastoma: A Retrospective Study by the Socie'te' Francaise des Cancers de l'Enfant (SFCE). Pediatr Blood Cancer 2009; 52:585-590.
9. Murphy MS, Sibal A, Mann JR. Persistent diarrhoea and occult vipomas in children. Br Med J 2000; 320:1524-1526.
10. Peng SY, Li JT, Liu YB, Fang HQ, Wu YL, Peng CH, et al. Diagnosis and treatment of VIPoma in China: (case report and 31 cases review) diagnosis and treatment of VIPoma. Pancreas 2004; 28:93-97.

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