

//
//

()

*

CBC

(*Medac Syrea*)
(*Signa GE*) MRI

MRI

$P < /$

() :

MRI

/ /

CBC

$(P < /)$

MCV

()

EH

()

()

HU

Hajjar

()

()

()

HU

()

()

Hb

)

(

(EH=Extramedullary Hematopoiesis)

()

CBC

Hb

()

MRI

EH

MRI

()

/ / Signa GE

P< /

)

(

Medac

Syrea

()

/ ± / / ± /)

)

(

Cr

Urea

CBC

(

/ ± /

/ ± /

MCV

/ ± / / ± /)

±)

(

NRBC

(±

MRI .

.(P< /)

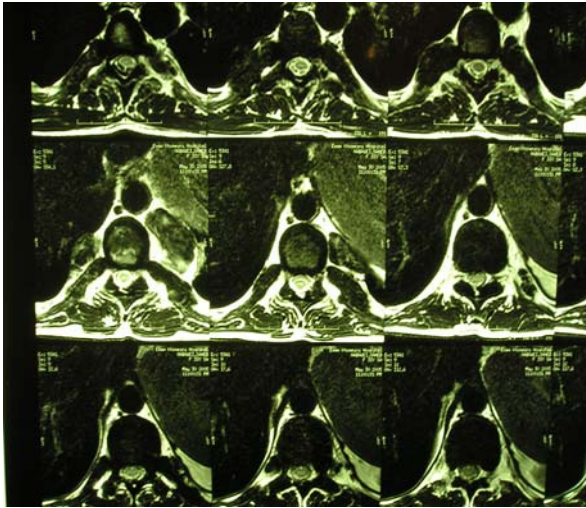
CBC		HU		HU	(mg/kg/d) HU	CBC		HU	
NRBC (%)	MCV (fl)	RBC ($\times 10^3/\text{mm}^3$)	Hb (gr/dl)			NRBC (%)	MCV (fl)	RBC ($\times 10^3/\text{mm}^3$)	Hb (gr/dl)
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	
/	/	/	/	/	/	/	/	/	

MRI .

()

HU

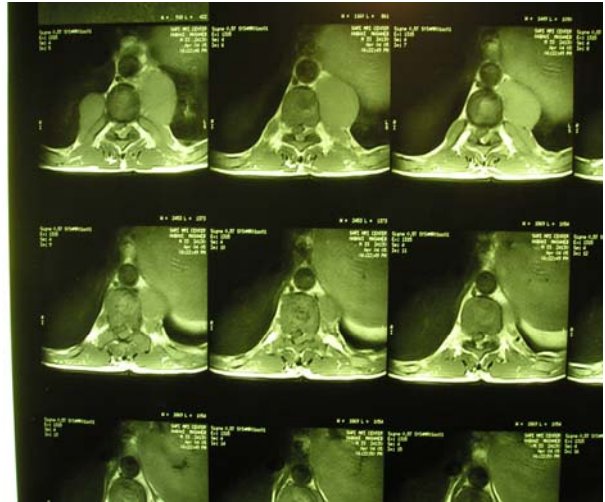
/ /



(

)

()



(

)

()

Koch

()

HU () HU

NRBC ()

EH

Saxon.

Meo

() () HU

MCV gr/dl

HU

()

HU

F

()

()

(SCFADs)

()

()

()

()

HU

()

HU

Hb F

()

Ineffective Erythropoiesis

.()

.()

.()

EH

HU

REFERENCES

1. Richard Lee G .Wintrobe S. Clinical Hematology. 10th ed. Philadelphia: Lippincott Williams & Wilkins.1999; P:1425.
2. Castelli R, Graziadei G, Karimi M, Capellini MD. Intrathoracic masses due to extramedullary hematopoiesis. Am J Med Sci 2004; 328: 299-303.
3. Pornsuriasak P, Suwatanapongched T, Wangsuppasawad N, Ngodngamthaweesuk M, Angchaisuksiri P. Massive hemothorax in a beta-thalassemic patient due to spontaneous rupture of extramedullary hematopoiesis masses: diagnosis and successful treatment. Resoip Care 2006; 51(3): 272-6.
4. Turgut B, Pamuk GE, Vural O. An interesting presentation of intrathoracic extramedullary hematopoiesis in a patient with thalassemia. Clin Lab Haem 2000; 25: 409-12.
5. Peng MJ, Kuo HT, Chang MC. A case of intrathoracic extramedullary hematopoiesis with massive pleural effusion: Successful pleurodesis with intrapleural minocyclin. J Formos Med Assoc 1994; 93(5): 445-7.
6. Aessopos A, Tassiopoulos S, Farmakis D, Moyossakis I, Kati M, Polonifi K, et al. Extramedullary hematopoiesis-related pleural effusion: The case of beta-thalassemia. Ann Thorac Surg 2006; 81(6): 2037-43.
7. Kapelushnik J, Shaler H, Schulman H, Moser A, Tamary H. Upper airway obstruction-related sleep in a child with thalassemia intermedia. J Ped Hemat Oncol 2001; 23(8):525-6.
8. Al-Aabassi A, Murad BA. Presacral extramedullary hematopoiesis: A diagnostic confusion concerning a rare presentation. Med Princ Pract 2005; 14(5): 358-62.
9. Bruneteau G, Fenelon G, Khalil A, Girot R. Spinal cord compression secondary to extramedullary hematopoiesis in a patient with thalassemia. Rev Neurol (Paris) 2000; 156(50): 510-3.
10. Cairo H, Wegener M, Debatin KM, Kohne E. Treatment with hydroxyurea in thalassemia intermedia with paravertebral pseudotumors of extramedullary hematopoiesis. Ann Hematol 2002; 81(8): 478-82.

-
11. Saxon BR, Rees D, Olivieri NF. Regression of extramedullary haemopoiesis and augmentation of fetal haemoglobin concentration during hydroxyurea therapy in beta thalassemia. *Br J Haematol* 1998; 101: 410-9.
 12. Meo A, Quartarone G, Piraino B, La Rosa MA, Ruggeri A, Cuppari C, et al. Intrathoracic extramedullary haemopoiesis and treatment with hydroxyurea in thalassemia intermedia. The 9th international conference on thalassemia and hemoglobinopathies. Oct 15-19, 2003 Italy.
 13. Koli-Kumar M, Mardani H, Keller MA, Guertin K, Huizdala E. Use of Hydroxyurea and recombinant erythropoietin in management of homozygous beta thalassemia. *J Ped Hemat Oncol* 2002; 24(9): 777-8.
 14. Vicari P, Figueiredo MS. Regression of extramedullary hematopoiesis with hydroxyurea therapy in beta thalassemia intermedia. *Rev Bios Hemotol* 2006; 28(1): 71-2.
 15. Voskaridou E, Kalotychou V, Loukopoulos D. Clinical and laboratory effects of long-term administration of hydroxyurea to patients with sickle-cell/Beta thalassemis. *Br J Haematol* 1995; 89: 479-84.
 16. Hajjar FM, Peason HA. Pharmacologic treatment of thalassemia intermedia with hydroxyurea. *J Pediatr* 1994; 125: 490-2.
 17. Ahmed F, Tobin MS, Cohen DF. Beta thalassemia spinal cord compression. *N Y State J Med* 1981; 81(1): 505-8.
 18. Koch CA, Li CY, Nesa RN, Tefferi A. Nonhepatosplenic extramedullary hematopoiesis: Associated diseases, pathology, clinical course, and treatment. *Mayoclinic Proceedings* 2003; 78: 1223-33.
 19. Habibzadeh F, Yadollahie M, Haghshenas M. Extra-medullary haematopoiesis in beta-thalassemia. *J Postgrad Med* 2005; 51(1): 45-6.
 20. Pace BS, White GL, Dover GJ, Boosalis MS, Faller DV, Perrin SP. Short-chain fatty acid derivatives induce fetal globin expression and erythropoiesis in vivo. *Blood* 2002; 100(13): 4640-8
 21. Perrin SP, Castaneda SA, Boosalis MS, White GL, Jones GS. Induction of fetal globin in beta-thalassemia: Cellular obstacle and molecular progress. *Ann NY Acad Sci* 2005; 1054(1): 257-65.
 22. Perrin SP. Fetal globin induction-Can it cure beta thalassemia? *Hematology* 2005;1: 38-44.
 23. Perrine S. Fetal globin induction in beta thalassemia: time to apply the first molecular treatment approach . The 10th international conference on thalassemia and heamoglobinopathies. Jan 7-10, 2006. Dubai. P:28.
 24. Vinchinsky E. Clinical advances in fetal hemoglobin modulators. The 10th international conference on thalassemia and heamoglobinopathies. Jan 7-10, 2006. Dubai. P: 28.
 25. Loukopulos D. Hydroxyurea in thalassemia intermedia. The 10th international conference on thalassemia and heamoglobinopathies. Jan 7-10, 2006. Dubai. P: 47.
 26. Bradai M, Abad M T, Pissard F, Lamraoui F, Skoponiski L, Montalembert M . Hydroxyurea can eliminate transfusion requirement in children with sever beta-thalassemia. *Blood* 2003; 102(4): 1529-30.

-
28. Ehsani MA, Hedayati-Assl AA, Zeinali S, Bagheri AR. Therapeutic effect of hydroxyurea in intermediate thalassemia patients. The 10th international conference on thalassemia and heamoglobinopathies. Jan 7-10, 2006. Dubai. A255.
 29. Karimi M, Darzi H, Yavarian M. Hematologic and clinical responses of thalassemia intermedia patients to hydroxyurea during 6 years of therapy in Iran. *J Ped Hemat Oncol* 2005; 27(7): 380.
 30. Loukopoulos D, Voskaridou E, Stamoulakatou A, Kalotychou V, Loutradi A, Cozma G, et al. Hydroxyurea therapy in thalassemia. *Ann N Y Acad Sci* 1998; 850: 120-8.
 31. Yeke Z, Rahiminejad MS. Hydroxyurea is effective in treating chronic leg ulcer of thalassemia intermedia. The 10th international conference on thalassemia and heamoglobinopathies. Jan 7-10, 2006. Dubai. A262.
 32. Kosaryan M, Mojtahedzadeh F, Tabarestani H, Vahidshahi K. Evaluation of bone density in the thalassemic patients: Does hydroxyurea can decrease the severity of osteoporosis? *Ped Endocrinol Rev* 2004; 2 sup2: 203-6.