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**Spinal cord compression due to beta-thalassemia intermedia: results of re-irradiation**

*A. Montero, S. Sancho, A. Hervas, R. Morera, S. Cordoba, I. Rodriguez, A. Ramos*  
*University Hospital Ramon y Cajal, Radiation Oncology, Madrid, Spain*

**Introduction:** The presence of extramedullary hematopoietic foci (EHF) are associated with a variety of hematological disorders such as hemolytic anemia, polycythemia vera, myelofibrosis or thalassemias and usually represents a compensatory mechanism for long lasting anemia. Spinal cord compression secondary to EHF is a rare phenomenon occasionally reported in scarcely transfused patients affected of beta-thalassemia. Treatment options comprises of surgical decompression, repeated red cells transfusions, systemic treatment with hydroxyurea or radiotherapy.

**Methods:** A 45 year-old male with previous history of heterozygous beta-thalassemia intermedia presented in 1995 with symptomatic thoracic spine cord compression secondary to the existence of paraspinal soft tissues masses extending from T3 to the T7 level. The patient underwent radiotherapy to a field encompassing thoracic spine from T2 through T9 up to a total dose of 3300 cGy in two weeks achieving a complete clinical recovery.

Six years later the patient presented with back pain, progressive bilateral lower extremity weakness and numbness. Extramedullary soft tissue masses at T5 level causing canal narrowing were demonstrated by magnetic resonance imaging. Surgical decompression was discarded and the patient underwent a new course of radiation therapy to a total dose of 1400 cGy with standard 2 Gy daily fractionation. With a two years follow-up the patient remains ambulatory with slight residual weakness but no numbness. No treatment-related toxicity has been observed on follow-up.

**Conclusions:** Spinal cord compression due to EHF is a rare clinical entity capable of being managed by radiotherapy. Total dose ranging from 750 cGy to 3000 cGy has been traditionally associated with a complete resolution of symptoms. Re-irradiation with low doses (1000-1500 cGy) is feasible, efficacious and well tolerated and should be considered in all of those patients presented with local recurrence not amenable of other treatment modalities.

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**Efficacy of intracoronary brachytherapy for the treatment of in-stent restenosis in patients with diabetes mellitus**

*J. Lyczek<sup>1</sup>, A. Witkowski<sup>2</sup>, Z. Chmielak<sup>2</sup>, J. Pregowski<sup>2</sup>, L. Kalinczuk<sup>2</sup>, A. Kulik<sup>1</sup>, M. Kawczynska<sup>3</sup>, W. Bulski<sup>3</sup>, W. Ruzyllo<sup>2</sup>*  
<sup>1</sup>*M. Skłodowska-Curie Memorial Cancer Center, Brachytherapy, Warsaw, Poland*  
<sup>2</sup>*National Heart Institute, Haemodynamic, Warsaw, Poland*  
<sup>3</sup>*M. Skłodowska-Curie, Medical Physics, Warsaw, Poland*

Diabetic patients, particularly with in-stent restenosis (ISR), are at increased risk of restenosis, repeat revascularization and mortality after percutaneous coronary intervention. The purpose of this study was to examine the efficacy of intracoronary beta-brachytherapy (beta-B) in diabetic patients with ISR and retrospective comparison with non-diabetic. The study cohort consisted of 68 consecutive patients with ISR who were treated with beta-B at our centre. Diabetic patients (10) were compared with non-diabetic (58). Clinical and angiographic characteristics were similar between two groups. Immediately after successful angioplasty at ISR all patients were treated with P32 beta-radiation. At 6-month follow-up diabetic and non-diabetic patients experienced similar restenosis (20.0% vs. 29.8%, p=0.7) and MACE (30.0% vs 34.5%, p=1.0) rates. In

multivariate logistic analysis diabetes mellitus was not an independent predictor of restenosis in MACE. Similar rates of restenosis and MACE were found in irradiated diabetic and non-diabetic patients with ISR. In view of these results, beta-B should be considered as a valuable treatment modality in diabetic patients with ISR

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**Epistaxis of geriatric patients - effect of radiation therapy**

*D. Fröhlich, M. Glatzel, G. Schaal*  
*Zentralklinikum Suhl gGmbH, Department of Radiotherapy, Suhl, Germany*

**Aim:** To evaluate the effect and the meaning of external radiotherapy for epistaxis in geriatric patients.

**Patients and methods:** In the last 30 years 80 patients were treated with radiotherapy for epistaxis in geriatric patients. We irradiate the nose region with a direct field with single doses of 3 Gy (300 rd) 2 times a week up to a total dose of 18 – 21 Gy (1,800 – 2,100 rd). Radiotherapy was carried out using the orthovoltage therapy unit with 60 (Tube d, SSD 5 cm) resp. 150 kV (Field size 6x8 cm, SSD 40 cm), 8mA.

**Results:** At 62 of 80 patients (77%) a hemostasis could be reached by the radiation therapy. Another 15 patients had only once a short period of epistaxis after radiation. Only 3 patients were resistant to our therapy. This treatment does not effect at Morbus Osler. At lower total dose the treatment was not successful. The therapy effect was in a sufficient degree at short distance irradiation and also the same at half deep therapy.

**Conclusion:** The radiation therapy of senile epistaxis is a method with high effectiveness and low risk in relation to tamponade or operation. If treatment with tamponade or operation is not successful, you should always think of the very good effect of the radiation therapy.

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**Successful radiotherapy of an infantile hepatic hemangioma with severe hypothyroidism. a case report.**

*S. Hesselmann<sup>1</sup>, O. Micke<sup>1</sup>, U. Schaefer<sup>1</sup>, J.H. Bramswig<sup>2</sup>, C. Werner<sup>2</sup>, N. Willich<sup>1</sup>*  
<sup>1</sup>*University Hospital Muenster, Radiotherapy - Radiooncology, Muenster, Germany*  
<sup>2</sup>*University Hospital Muenster, Paediatric Endocrinology - Children's Hospital, Muenster, Germany*

**Introduction:** Large hepatic hemangiomas can cause respiratory failure, requiring the use of mechanical ventilation, heart failure, coagulopathy and severe and often fatal hypothyroidism in infants.

**Patient and Method:** We report the case of a male neonate with a large inoperable hepatic hemangioma, who developed high-output cardiac failure, respiratory distress and most severe hypothyroidism. Treatment of the hepatic hemangioma was unsuccessful even when high doses of prednisolone and alpha interferon-2b were used. Hypothyroidism was controlled only with excessive oral doses of T4 and T3. Because there was no response to medical therapy and the patients clinical condition deteriorated, an emergency radiotherapy of the liver was performed at the age of 5 months with a total dose of 6.4 Gy HD (1x 1.0 Gy HD and 9x 0.6 Gy HD over 14 days). We observed a rapid improvement of the child during the treatment period. High-output cardiac failure resolved during the subsequent 9 months. Hepatomegaly began to regress and the liver function normalized. T3 treatment was discontinued at 11 months, T4 therapy at 22 months of age. Thyroid function was normal.

**Conclusion:** In this patient with a large hepatic hemangioma radiotherapy was successful in treating high cardiac output failure, respiratory distress and life-threatening hypothyroidism. Thus,