

## 78. SCREENING FOR PROSTATE CANCER IN GREATPOLAND CANCER CENTER

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**Introduction:** Between November 2000 and January 2001 screening for prostate cancer has been conducted in GreatPoland Cancer Centre. Among men in Poland prostate cancer is one of the most common cancers and cause of deaths. The incidence of clinically diagnosed prostate cancer rises more rapidly with age than does any other malignancy.

**Material and methods:** The screening involved 1657 male participants. Our research was design with participants eligibility restricted to men 50 to 70 years old who were not already being evaluated for the disease.

Screening for prostate cancer was based on prostate specific antigen and digital rectal examination.

**Results:** Among patients with elevated PSA level, analysis at PSA ratio was performed (52 patients).

All patients with abnormal PSA level and digital examination had (TRUS). Biopsy was performed for 6 patients. Three of them were proven for cancer. During our research we looked for genetic aspect of prostate cancer.

**Conclusions:** Screening for prostate cancer was met with big enthusiasm among men and hopefully very similar screening would be introduced for larger group of patients.

## 79. THE EFFECTIVENESS OF PAIN TREATMENT WITH STRONTIUM 89 IN PATIENT WITH OSSEOUS META- STASES

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**Aim** of this study was to assessment of 89 Sr therapy as pain treatment modality in the group

of patients with multiple bone metastases.

**Material and methods:** From January 2000 to October 2000 in our center were treated 41 patients; 17 - prostate cancer and 24 - breast cancer patients. All patients had applied only one dose of 150 MBq of 89 Sr. Before and follow-up each patient has been evaluated; performance status according to the Karnofsky Scale and paro intensity according the VAS scale. We did not observe any clinical important haematological side effects. The ionisation dosimetric monitoring of the sources and the radioactive refuse were recorded. The radioactive refuse was storage in special container when the activity decreased to the background.

**Results:** We noted relief of paro as follow:

- "complete" 18 of 41 patients (8-prostate cancer, 10 - breast cancer),
- "partial" 12 of 41 patients (3- prostate cancer, 9- breast cancer),
- "no effect" 11 of 41 patients (6-prostate cancer, 5- breast cancer).

**Conclusions:** We suggest that therapy of painful multiple bone metastases with application of 89 Sr is effective and safe.

## 80. RADIATION TREATMENT OF PAINFUL VERTEBRAL HEMAN- GIOMAS

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**Aim** - The aim of this study was to assess efficacy of radiotherapy as a method of vertebral hemangiomas treatment.

**Material and method** - The material contains 14 cases of irradiated painful vertebral hemangiomas. All patients were treated using conventional fractionation scheme (df = 2 Gy) up to 20, 24 or 30 Gy. The lesion reossification and degree of pain relief and correlations between it and different biological and technical factors were evaluated one and six months after treatment completion.

**Results** - One month after treatment complete pain relief was in 36% of cases (mean degree of

pain relief – 70%), five months later in 67% of cases (mean degree of pain relief – 90%), but in all cases some pain relief was noted. No correlation between treatment outcome and different biological and technical factors was found. No dose-response relationship was noted. Partial reossification was found in five cases six months after treatment.

**Conclusion** - Obtained results suggest that radiotherapy of vertebral hemangiomas is easy, effective analgetic treatment even when doses of 20-24 Gy are used and that anti-inflammatory effect of radiation plays the main role in this kind of treatment.

## 81. RADIOTHERAPY FOR PAINFUL SCALUPO-HUMERAL PERIAR- THRITIS

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**Purpose:** The aim of this study was to evaluate usefulness of radiotherapy as a treatment of painful scapulo-humeral periarthritis.

**Material and methods:** The material contains 15 patients (9 women and 6 men) suffered from painful scapulo-humeral periarthritis (SHP). Patients were treated using gamma <sup>60</sup>Co radiation using 1 Gy fractions to 6 Gy of total dose delivered in 8 days. In all cases conventional anti-inflammatory treatment was unsuccessful or impossible to deliver. The mean period with SHP symptoms was 26 months. The mean follow-up period was 24 weeks. The mean degree of pain relief and improvement of limb mobility was assessed after radiotherapy completion, 1, 7 weeks after treatment and during the last control.

**Results:** The mean degree of pain relief was respectively 36%, 71%, 88% and 90%. Significant improvement of limb mobility was noted in all cases.

**Conclusion:** Obtained results allow to form conclusion that anti-inflammatory radiotherapy is effective treatment modality of painful scapulo-humeral periarthritis.

## 82. IBU AND CT BASED CONFORMAL HDR BRACHYTHERAPY

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The aim of the study is to present advantages of IBU and CT based panning in conformal brachytherapy (BT).

Applicator localization and dose planning in modern BT can be achieved by an integrated BT Unit (IBU) and CT based planning. Due to on-line connection between the localizer and the planning system, the fluoroscopy images are imported directly for reconstruction purpose, resulting in dose distribution view in operating room after dose calculation. That enables - if necessary - optimisation of the dose distribution by optimisation of the implant geometry. Fluoroscopy images can be easily stored to database, and used for verification during next fractions. The disadvantage of IBU based planning is that there is no possibility to enter volumes of interest into treatment plan. The localization of the applicator during fluoroscopy is analysed mostly due to well seen bony structures.

In order to add information concerning also soft tissue during planning procedure, CT examination of patient with implaced applicator is performed followed by all volume of interest definition.

The dose distribution calculated on the base of IBU and CT images are comparable, however CT-based planning visualizes dose distribution in all selected volumes of interest (f.e. in critical organs, PTV etc). Verification of the applicator localization by IBU is an easy, reproducible method however the localization of the applicator in relation to surrounding tissues is possible only in CT-based option.

## 83. ASTROCYTOMA U CHOREGO Z WIELOLETNIM PRZEBIEGIEM BIAŁACZKI WŁOCHATOKOMÓR- KOWEJ

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