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AbstractBook

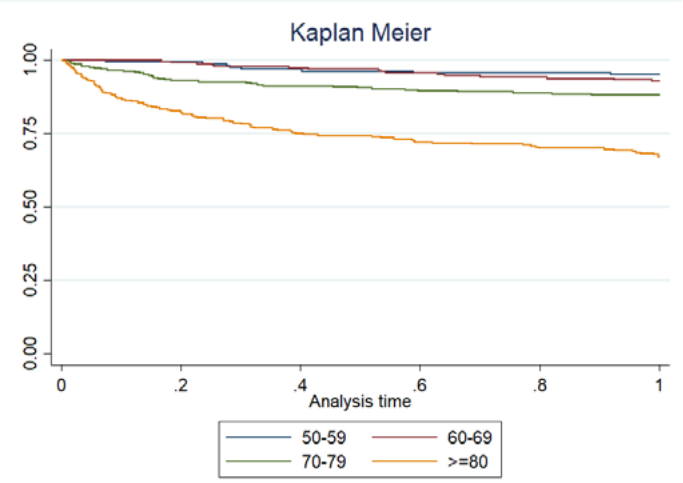

Figure. The Kaplan-Meier survival curve of minor-trauma hip fractures by age categories

Conclusion: The results showed a high mortality in patients with hip fractures. Considering the rapidly ageing population in Iran, resulting in a higher incidence of osteoporotic hip fractures, comprehensive strategies are needed to prevent fragility fractures in elderly populations.

P770

EFFECTS OF MIRROR THERAPY IN COMPLEX REGIONAL PAIN SYNDROME TYPE 1: A RANDOMIZED CONTROLLED STUDY

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Objective: Mirror therapy, a neurorehabilitative exercise performed by using a mirror, is used as complementary to other rehabilitation methods. In recent studies, positive effects of mirror therapy have been shown in patients with Complex Regional Pain Syndrome (CRPS) Type 1 secondary to stroke. Studies examining the effects of mirror therapy in CRPS-Type 1 developed secondary to traumatic factors are limited. This study aimed to investigate whether mirror therapy prescribed in addition to a conventional physical therapy and rehabilitation (PTR) program was effective on clinical outcomes in patients with CRPS-Type 1.

Methods: This randomized controlled single-blind study included 40 patients with CRPS-Type 1of the hand according to Budapest diagnostic criteria, who were referred to the Dept. of Physical Medicine and Rehabilitation, Hand Rehabilitation Unit at the Medical Faculty of Ankara University. Participants were allocated randomly into two groups. All patients received routine PTR program (contrast bath, hot pack, TENS, desensitization, exercises, occupational therapy) for 4 weeks, 5 sessions/week, 45-60 min/d. The mirror group received additional mirror therapy to the affected hand for 30 min/d. All patients were assessed before and after the therapy as well as at the first-month follow-up. The primary outcome measure was pain intensity by 0-10 Numeric Rating Scale. Secondary outcome measures were grip strength, lateral pinch strength, hand/wrist circumference, hand dexterity (Moberg pickup test), hand functioning in activities of daily living (Duruöz Hand Index) and health-related quality of life (Nottingham Health Profile).

Results: Both groups showed significant improvements in terms of pain severity, grip strength, lateral pinch strength, wrist circumference, hand dexterity, hand functioning and health-related quality of life ($p<0.0167$). When groups were compared regarding the improvements in assessment parameters, no statistically significant difference was found between the two groups in any of the outcomes ($p>0.0167$).

Conclusion: Mirror therapy applied in addition to routine PTR program did not provide extra benefit for the improvement of clinical outcomes in patients with acute CRPS-Type 1 of the hand due to traumatic causes.

P771

MORPHOLOGICAL DYNAMICS OF RHEUMATOID SYNOVIUM: SEEKING FOR SPECIFICITY

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Objective: To characterize histological and immunohistochemical patterns of rheumatoid arthritis in relation to period from disease onset using previously published data.

Methods: Databases of scientific publications (Scopus, Web of Science, PubMed, eLibrary Russian scientific database) were included in the search using appropriate search terms and period of publication 1990-2021. Assessment of publication quality and relevance as well as data interpretation was performed by consensus of the authors.

Results: Focal synovial and subintimal necrosis as well as proliferation signs have been found as first morphological features of RA. Earlier stages of the disease were characterized primarily by morphological features of angiogenesis, synovial oedema together with foci of lymphoid infiltration. Conversely, synovial proliferation pattern (hyperplastic villi, increased layer number, mucoid degeneration) along with both fibrinoid necrosis and lymphocytic extension with formation of lymphoid nodules as well as pannus expansion with destruction of synovium and cartilage have been

observed in rheumatoid synovia at the late disease phase. Silent synovial chondromatosis, amyloidosis, hyalinosis, perivascular sclerosis could also be found in some RA cases with long disease history. CD45 positive cells were usually localized in the outer layer while inner cells are usually CD45 negative. CD20 positive B lymphocytes in rheumatoid synovia are localized in subintimal follicles and, in a lesser extent, within perivascular areas. CD138 positive plasmocytes are also abundant but they can be found diffusely out of the follicles and outer synovial layer. CD 68 positivity of the synovial specimens is generally higher than CD20 positivity demonstrating presence of macrophageal cells both in outer synovial layer and subintima.

Conclusion: There is a sequence of morphological and immunohistochemical patterns in synovium that is more frequent in rheumatoid arthritis comparing to other similar joint diseases. These early immunohistochemical features in synovial tissue could be a fundamental basis of RA diagnosis in very early stage of disease or in obscure arthritis cases.

P772

LONG-TERM FOLLOW OF DXA SCANS ON A BREAST CANCER SURVIVOR FEMALE

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Objective: Breast cancer treatment, either surgical or hormonal, induces loss of ovarian function leading to a decrease in oestrogen levels. This, in turn, causes bone mass loss and increases the risk of osteoporosis and fracture. (1-5) We aim to introduce a female breast cancer survivor patient and the long-term follow of DXA.

Methods: This is a case report.

Results: This is an 80-year female patient, who survived breast cancer, for which she underwent surgery, received radiotherapy, and received treatment with tamoxifen in 2017 and anastrozole until 2019. The patient's medical history includes osteoporosis treated (only) with zoledronic acid (since 2013) multiple fractures, vitamin D deficiency, stroke, secondary hyperparathyroidism, thrombophlebitis (while being treated with Tamoxifen), dyslipidemia, multinodular goiter. In 2013 the endocrine panel showed vitamin D deficiency: 25OHD=10.4 ng/mL (N:30-100) and normal BTM (bone turnover markers) in terms of CrossLaps=0.603 ng/mL (N: 0.33-0.782), osteocalcin=34 ng/mL (N:15-46), PTH=48 pg/mL (N: 15-65). DXA confirmed osteoporosis: lumbar L1-4 BMD(g/cm^2)=0.623, T-score (SD)=-3, Z-score (SD)=-1.4; femoral neck(right) BMD(g/cm^2)=0.646, T-score(SD)=-2.8, Z-score(SD)=-1.2; femoral neck BMD(g/cm^2)=0.600, T-score(SD)=-3.2, Z-score(SD)=-1.6; total hip(right) BMD(g/cm^2)=0.699, T-score(SD)=-2.5, Z-score(SD)=-1.1; total hip(left) BMD(g/cm^2)=0.665, T-score(SD)=-2.8, Z-score(SD)=-1.4. She received 5 mg IV zoledronate. After 1 y (in 2014): DXA improved (the same prevalent vertebral fractures): lumbar L2-3 BMD(g/cm^2)=0.862, T-score(SD)=-2.9, Z-score(SD)=-1.2; femoral neck BMD(g/cm^2)=0.602, T-score (SD)=-3.1, Z-score (SD)=-1.5; total hip BMD (g/cm^2)=0.686, T-score (SD)=-2.6, Z-score (SD)=-1.2. Zoledronate 5 mg IV was administered and 2 y later, DXA continued to improve: lumbar L1-4 BMD(g/cm^2)=0.882, T-score(SD)=-2.5, Z-score(SD)=-0.1; femoral neck BMD(g/cm^2)=0.626, T-score (SD)=-3, Z-score (SD)=-1.2; total hip BMD (g/cm^2)=0.692, T-score (SD)=-2.5, Z-score (SD)=-0.9. In 2019 (at the end of anastrozol regime) DXA showed increased BMD: lumbar L1-3 BMD(g/cm^2)=0.899, T-score(SD)=-2.3, Z-score(SD)=-0.6; femoral neck BMD(g/cm^2)=0.617, T-score (SD)=-3, Z-score (SD)=-1.1; total hip BMD (g/cm^2)=0.628, T-score (SD)=-3, Z-score (SD)=-1.2. After another 5 mg of zoledronate, she came for most recent evaluation (18 months later) which showed: low 25OHD=20.3 ng/mL (N:30-100), normal bone turnover markers: osteocalcin=35.31 ng/mL (N:15-46), CrossLaps=0.43 ng/mL (N: 0.33-0.782), P1NP=57.51ng/mL (N: 20.25-76.31) and mildly increase PTH=92.38 pg/mL (N: 15-65) with normal calcium levels and DXA showing good results at lumbar spine (no incidental fracture): lumbar L1-4 BMD(g/cm^2)=0.972, T-score(SD)=-1.7, Z-score(SD)=0.1; femoral neck BMD(g/cm^2)=0.578, T- score (SD)=-3.3, Z-score (SD)=-1.3. Supplements with cholecalciferol 2000 UI/d in addition to 5 mg zoledronate were once again recommended. **Conclusion:** Due to the increased risk of osteoporosis and fractures in patients receiving breast cancer treatment, long-term follow of DXA and treatment are crucial. Our patient came for anti-osteoporotic medication a few years later since management for mammary cancer was initiated. Despite late initiation, anastrozole concomitant medication and aging on a background of severe osteoporosis therapy, BMD improved over the years.

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