The purpose of the study was conducted to investigate the effect of therapeutic ultrasound (US) versus ozone therapy on tubal patency in cases of tubal adhesions. This study was carried on 30 regular menstruating women diagnosed by Hysterosalpingography (HSG) as having fallopian tubes adhesions and complained of pelvic pain and infertility, and another 15 normal women served as a control group (C) for determining the standardization of normal values of Human Soluble Intercellular Adhesion Molecule-1 (sICAM-1) and Human Interferon gamma (IFN-γ). They were selected from the Outpatient Clinic of Gynecology Department at El Menoufiya University Hospital. Patients were divided randomly into 2 equal groups in numbers (A & B), Group (A) received US therapy for 10 minutes for each adhesion site (Suprapubic, Right iliac fossa and Left iliac fossa) with continuous US mode at a frequency of 1MHz and at intensity of 1.5 W/cm², and Group (B) received ozone therapy in the form of vaginal insufflation with ozone concentration of 40 μg/ml and the volume was 100 ml for 20 minutes. Both groups (A & B) received treatment as 3 sessions per week for 24 sessions interrupted only by menstruation of each patient. Evaluation of both groups (A & B) was done through: Pain assessment scales including Present pain intensity (PPI) scale, Pain relief (PR) scale as well as pain sites as detected by McGill Pain Questionnaire (MPQ) were assessed before and after 12 as well as 24 sessions of treatment. Chlamydial Immunoglobulin M & G (IgM & IgG) immunoassays, sICAM-1, IFN-γ and HSG were assessed before and after 24 sessions of treatment in addition to pregnancy rate after 6 months of ending treatment. But Chlamydial IgM & IgG, sICAM-1 and IFN-γ were assessed only one time in Group (C). The results of this study showed significant decrease in pain as well as its sites, chlamydial IgM as well as IgG, sICAM-1, IFN-γ in both groups (A & B) and decrease tubal adhesions in group (A) after the end of treatment. After 24 sessions of treatment comparison between both groups (A & B) revealed significant decrease in Chlamydial IgG in group (B) than group (A) and significant decrease in sICAM-1 and IFN-γ in group (A) than group (B) accompanied with a significant increase in tubal patency and pregnancy rate in group (A) than group (B). Also, sICAM-1 showed significant difference and IFN-γ showed non significant difference between group (A) and (C) whereas, sICAM-1&IFN-γ showed significant difference between group (B) and (C) after end of treatment which represents a marked decrease in adhesions in group (A) than group (B). Accordingly, it can be concluded that US and ozone therapy are effective therapeutic modalities for treating fallopian tubes adhesions as well as they are safe modalities and have no harmful effects on women. Also, there is a superiority of US than ozone therapy in treating such cases.
This study was done to investigate the effect of aerobic exercise on bone mineral density (BMD) and to determine its effect on Quality of Life (QOL) as well as physical fitness after chemotherapy as well as radiotherapy in post menopausal breast cancer women. Forty Five asymptomatic osteopenic post menopausal breast cancer women were selected from Outpatient Clinic of Oncology of Maadi Armed Forces Hospital. They were assigned randomly into 2 groups: Group (A) twenty nine women performed specific aerobic exercise program for hip and lumbar spine as well as weight bearing exercise program on treadmill for 6 months. Group (B) sixteen women led their ordinary lifestyle throughout the study period. Both groups were followed the same hormonal therapy Femara 1 ml gm /day. Evaluation of both groups (A&B) was performed before and after 6 months of treatment through measuring BMD by DEXA, Serum calcium, as well as alkaline phosphatase, QOL by FACT-G scale and physical fitness assessed by 6 minute walk test and VO$_{2}$max. Results revealed a statistically significant increase in BMD, serum calcium, QOL and physical fitness in group (A) and did not in group (B) after 6 months of treatment. So it can be concluded that specific aerobic exercise program for hip and lumbar spine muscles and weight bearing exercise on treadmill for 6 months are effective methods for maintaining BMD and improving QOL as well as physical fitness of post menopausal breast cancer women.

**Key words**: Post menopausal.  
: Exercise.  
: Bone mineral density.  
: Breast cancer.  
: Chemotherapy  
: Hormonal Therapy.

**Arabic Title Page**: تأثير التمرينات الهوائية على كثافة العظام بعد العلاج الكيميائي

**Library register number**: 2703-2704.