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## Determination of some heavy metals in blood serum of pregnant women which induced miscarriage using ICP technique

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**Introduction:** Inductively Coupled Plasma - Optical Emission Spectrometry (ICP-OES) is a powerful tool for the determination of metals in a variety of different sample matrices. Abortion is defined as the termination of a pregnancy resulting in or closely followed by the death of the embryo or fetus. It also called miscarriage which is the loss of the pregnancy prior to viability (before 22 weeks of pregnancy or less than 500g).

**Aim:** The aim of this study was to determine the concentration levels of arsenic, calcium and manganese in blood serum of women which induced miscarriage in their first trimester (first 14 weeks of gestation) and healthy pregnant women with no history of miscarriage as control.

**Materials & Method:** Serum concentrations of heavy metals like arsenic, calcium and manganese were assayed using (ICP-OES) technique in n=50 patients (women who induced miscarriage) and n= 15 healthy pregnant women (control).

**Results:** Results were expressed as Mean±SEM, the results showed that mean serum concentration levels of arsenic, calcium and manganese in patients were (0.0569±0.0002), (5.547±0.1033) and (0.0762±0.00023) mg/L-1 respectively, while in controls were (0.0371±0.0009), (8.415±0.1215) and (0.0783±0.00025) mg/L-1 respectively. Differences in serum arsenic, calcium and manganese between patients and controls were highly significant, (P value<0.0001).

**Conclusion:** The study showed that there was a highly significant reduction in serum levels of calcium and manganese in patients as compared to control group, while there was a highly significant increase in serum levels of arsenic in patients as compared to control group.

### Biography

Mohammed M Shukr has finished his BSc degree in Chemistry from University of Salahaddin, College of Science, Iraq. He has done his MSc degree from University of Salahaddin, Iraq. Currently he is working as a Chemist at Clinical Laboratory.

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