INTRODUCTION
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Abortion refers to the termination of pregnancy whether it be spontaneous or induced before the twenty week, after which the child is considered to be viable. If pregnancy terminates between the twenty week and the thirty seventh week, the term premature labour is employed. In most of cases exact etiology of abortion is obscured but certain factors are responsible for causation of abortion.

For at least a hundred years magnesium has been known to be present in human body.

Magnesium levels in normal pregnancy were first described by Plass and Bogert (1923), who found a decrease in later part of pregnancy.

Magnesium is the forth most abundant cartion in man. In nature as a whole magnesium appears to be involved in reactions as photosynthesis, Hibernation, cell adhesion and the metabolism of carbohydrates, proteins and nucleo-proteins (Aikawa, 1963).

Biochemist have recognized for some time that it is essential to many enzyme reactions. This association of magnesium with to many different biological processes has lead scientists to think it has same single fundamental role to play.
Magnesium contributes for stabilization of highly ordered organization of macromolecular structures DNA, RNA and ribosomes. Genetic information stored in DNA is transcribed into messenger RNA, which is turn translated that information into amino acid sequences in the newly synthesized protein.

The physical integrity of DNA held appears to be depend upon magnesium. The physical size of RNA aggregates is controlled by the concentration of magnesium and polypeptide formation can not proceed unless magnesium concentration is optimal. All of these functions again depend upon the ability of magnesium ion to form chelates. The fundamental role of magnesium in all biological processes is therefore, that of chelating agent.

Magnesium has important effect on central nervous system and neuromuscular transmission. It is a depressant of central nervous system and low magnesium levels may evoke increase irritability, confusion and convulsions.

The central nervous system and the myoneural depression produced by magnesium can be antagonized by calcium.

Magnesium also possesses local anaesthetic activity and depresses myoneural transmission by reducing the quantal
release of acetylcholine and by antagonizing its depolarizing effect at the motor end plates and by reducing the excitability of muscle cell membrane.

Magnesium has been associated with neuromuscular conduction in heart and muscle (O'Walaas, 1950) and thromboembolic phenomena due to oral contraceptives (Dale and Simpson, 1972).

Plasma concentration of magnesium is normally maintained within very narrow limits, it being predominantly an intracellular ion. The laboratory detection of clinical magnesium deficiency is very difficult because the plasma magnesium often differs only slightly from normal, even in the presence of clinically demonstrable deficiency.

Since there multiple factors that influences the absorption and excretion of magnesium, as well as the amount needed for metabolic processes, it is not surprising that there is disparity as to what the magnesium requirement. Increase the intake of calcium, phosphate, vitamin D and protein, each increase the magnesium requirements. Fats and sugars may also increase the magnesium requirements.

The knowledge of its precise role in human physiology and pathology is surprisingly limited. Biological functions of magnesium particularly its role as an activator in
biochemical system, pharmacological properties and functions as essential nutrient for animal and plants have been the submit for intensive investigation.

Such rapid and significant advances in understanding of the metabolism of this ion have stemmed, largely from the discovery of flamephotometer and spectrophotometer, which provided a simple and precise method for the analysis thereby revolutionizing the field. Unfortunately the analytical chemistry of magnesium has not revealed similarly advanced stages. Technical handicap unquestionable account for the paucity of knowledge of this metabolite in various diseases.

Magnesium is a light white metal of atomic number 12 and atomic weight 24.32. It is extremely reactive and will burn in air, CO$_2$. It is invariably present in all living tissues and is essential for life. It is present in chlorophyll of all green plants and also present as universal microconstituent of lower plants.

In human body, it is found in all the tissues and forms a large part of the cations inside the cell, being second to potassium in this regard. The adult human being has whole body content of 25 gms of magnesium (Wacher and Vallee 1958). Half of the total magnesium is in the skeleton, rest of it is intracellular; However, the total magnesium in extracellular fluids represents only 1% of the magnesium in the body.
There is enough information available in literature that changes in the magnesium levels in blood occur in pregnancy. There are conflicting reports however about the decrease or increase in the serum magnesium levels in pregnancy. Similarly there is controversy about the time sequence of these changes in the course of gestation and also about the changes in serum magnesium concentration during and after labour.

Thus following objectives were undertaken in the present study:

1. To find out serum magnesium levels in various types of abortion and preterm labour, normal pregnant women and nonpregnant women.

2. To correlate the serum magnesium levels with biochemical alterations responsible for causation of abortions and preterm labour.