

SEPTIC ABORTION

THESIS

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**IN
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I- AIM OF THE WORK

AIM OF THE WORK

In order to know the site of the problem of septic abortion, This study was done in a retrospective way on the patients admitted to the Ain Shams University Hospital in the last 5 years. The previous investigators stated that anaerobic infections are the Commonest type complicating abortion So, We tried intravenous metro-ridazole in this study as antimicrobial agent in cases of septic abortion.

II- REVIEW OF LITERATURE

REVIEW OF LITERATURE

Historical Review:

The word abortion is derived from the latin aboriri meaning to detach from its proper site (Schwarz, 1968). In general to the Layman, the term abortion now implies criminal interference. In medical History of contraception, Himes 1935 was the earliest to record of an abortifacient to an ancient Chinese involving the use of mercury. Schwarz 1968 reported that in Ancient Greece, Aristotle and Plato advocated abortion for pregnant woman who had already completed her desired family. Aristotle also advised abortion for the woman who conceived after forty years. In that time induced abortion was carried out by midwives. Further reports by (Schwarz 1968) that during Hippocratic period clinical picture of patient with neglected septic abortion and pelvic thrombophlebitis was described.

Taussig 1939 found that every tribe has some methods of producing abortion varying from oral agents to abdominal Trauma, to the placement of foreign bodies.

Most legal and medical Text books regard abortion as the interruption of pregnancy before the seventh

month (Twenty eight weeks) of gestation (Javert 1957). However Sullivan 1922 classified abortion as occurring before the sixteenth weeks of gestation and miscarriage between The sixteenth and twenty-eight weeks of gestation. Adair 1940 employed the term abortion up to 5.5 months, while Charpantier 1883 applied it to the 6th month. The weight of the fetus was used as criterion for the definition of abortion by another group of workers as Ribemont et al 1894 who used the weight of 1000 gm. as the criterion of viability. Douglas 1950 and Greenhill, 1966 used a fetal weight of 500 gms. or less as their definition of abortion. Eastman 1940 applied the term abortion for a fetus of 400 gms or less. However Javert 1949 define abortion as the termination of pregnancy before the 22 nd weeks of gestation resulting in expulsion of a fetus weighting 500 gms or less. At this stage of pregnancy the fetal crown -rump length was found to be about 18 centimeters (Nesbitt 1974).

The abortion ratio is definitely higher among women who aborted in previous pregnancies, than among those who had viable babies (Tietze 1948).

Greenhill 1966 reported that it is impossible to compute the incidence of abortion in a country generally as the number of very early abortions cannot be determined, being considered delayed or profuse menstruation. Further more hospital figures do not represent conditions of private practice, because only complicated cases of abortion are sent to hospitals, and finally many abortions are deliberately concealed, or they occur spontaneous and patient do not report them. According to United Nation 1954, Tietz 1953 the incidence of spontaneous abortion is usually quoted as 10% of all pregnancies. The higher estimates 15% of all pregnancies received support from the finding of Donald's group 1967, Hellman and Co. Workers 1969. In a series of 111 abortions Bates & Zawadzki 1964 found that 27.9% were practiced by physicians, 22.5% by midwives, 5.4% by quacks and the remaining either by Amateur or Self induced. Of the numerous methods employed to induce abortion and mentioned by Schwarz 1968 are the introduction of foreign bodies as rubber catheter, metal stylet, metal sound, knitting needle, crochet hooks, pencil or other household objects. Using high pressure docubes into cervicalos

containing variety of agents as soap solution, Turpentine solution, lysol. Also potassium permengnate used as Tablets placed directly into cervical os. Air insufflation into vagina and uterus. Oral agent as ergot preparation, oxytocin, quinine, Strychnine. Intra. amniotic injection of hypertonic saline or glucose, Violent exercise, direct blow to abdomen, horseback riding. Some of these methods have little effect upon pregnancy, other are successful and still other are highly dangerous to the patient. Recently the method used for termination of pregnancy and mentioned by (Stallworthy 1971) are:

- 1) Vacuum aspiration and/or curettage.
- 2) Intra-amniotic injection of hypertonic glucose combined with penicillin.
- 3) Extra-amniotic injection of aminacrine 1%.
- 4) Prostaglandins administered by the intravenous or intra-uterine extra-amniotic route.
- 5) Hysterotomy.
- 6) Abdominal Hysterectomy.

Complication of these procedures as reported by (Stall worthy 1971) are Haemorrhage, cervical laceration,

uterine perforation, sepsis, peritonites, septicaemia pelvic inflammatory disease, Urinary tract infection and deep vein thrombosis.

AEIOLOGY OF SPONTANEOUS ABORTION:

Abortion may occur when the fertilized ovum contain material which is genetically defective and incapable of normal development. This is due to defective germ plasma, (Thiede 1969) which was stressed by Huntington 1929 as the chief cause of abortion. This genetic anomaly has been explained by chromosomal aberration. (Danesino et al 1968). Thiede 1969 found that 25% of abortion are associated with major types of chromosomal aberrations including Trisomy 40%, poly ploidy 25%, monosomy 20% and a popular explanation for these genetic accidents is that the egg is over ripe at time of fertilization due to delayed ovulation or late insemination. In such cases pregnancy cannot be salvaged by hormonal therapy. Heutig and Rock 1949 found that defective fertilized ovum is due to intrinsic germ plasma quality rather than to its environment and is the main factor in production of abortion. Also

abortion occur as the result of inadequate hormonal milieu for conceptus. This may be due to insufficient placental synthesis of H.C.G. (Ilyod 1964) to stimulate corpus luteum or inadequate response of corpus Luteum, resulting in sub-optimal secretion of estrogen and progesterone. Late in gestation abortion may be due to failure of the placenta to metamorphose from a primary protein-synthesising gland (H.C.G.) into an efficient steroid forming organ. Other possible suggested factors in the etiology of abortion may be virus, Radiation; Chemical factors, and as a remote effect of hormonal contraceptives. Such factors however are still under investigations. The male factor should not be lost sight of as failure of implantation may be a "delayed response" ^{of endometrium for implantation} resulting from the fertilization of an ovum by an abnormal sperm. Knudsen 1956 has demonstrated that chromosomes with inverted segments bearing abnormally arranged genes can arise during the first stage of reductive division in spermatogenesis. This type of sperm may appear normal and is capable of fertilization, but the genetic constitution of the embryo is probably lethal (Behrman and Kistner 1968).

The following interrelated factors seem to be important in contributing to pregnancy inefficiency (Nesbitt 1974).

- Very young or advanced maternal age.,
- Previous perinatal losses.
- Poor socio-economic status (mal nutrition),
- Prolonged conception- effort time.
- Impaired maternal health (hypertension, infections, syphilis, diabetes).
- Anatomic defects of generative tract (myoma, adenomyosis, congenital uterine anomalies, incompetent cervical os).
- Axonal or pelvic pathology (tumour or infection)
- Blood incompatibilities between mother and fetus.
- Psychogenic factors (neurosis, fear, hostility , insecurity, unhappiness).
- Endocrine imbalance.

MECHANISM OF ABORTION

According to (Nesbitt 1974). There is a progressive deterioration of the placental functions following death of the fetus and a reduction in steroid production, which fail at a critical level to maintain the integrity of the decidua. Regressive decidual change, Haemorrhage, necrosis and separation of the placenta.

The uterus become increasingly irritable and eventually labour is initiated which result in expulsion of the product of conception.

PATHOLOGICAL CHANGES IN ABORTION

•Changes in the placenta. (Nesbitt 1974).

The placenta undergo progressive deterioration after death of the fetus or may well preserved. The placenta of late abortuses may exhibit abnormalities of attachment, separation and form and rarely benign tumours. Specific lesions of tuberculosis, Syphilis, non specific degeneration in association with maternal diabetes, hypertension may be found. (Nesbitt 1967) found a variety of pathological lesion including congenital malformation, immaturity, degenerative changes; senility and may be infections of the Villi. Hertzig and Edmonds 1940. Savage 1951 and Huber, Melin & villios 1957 reported hydropic degeneration in 40% in spontaneously aborted ova. In a study of 2000 spontaneous abortion Jeyart 1957 considered the placenta normal in only 12% of abortion specimens.