INTRODUCTION
"Timely blossom, infant fair,
Fondling of a happy pair,
Every morn and every night
Their solicitations delight."

- Ambrose Philips

Barren marriages are as old as memory. Mythological legends narrated many cases. The Hindu holy writings, Ramayana and Mahabharata described few stories of infertile couples, their sorrow when failed to have a child, their worships and sacrifices for the goal.

The great story of Lord Rama and his kingdom is narrated by Sage Valmiki in Ramayana. Lord Rama was the eldest son of King Dasharatha. Dasharatha was son of Aja, the king of Ayodhya, the capital of the flourishing kingdom of Kosala on the banks of the river Sarayu. On the advice of his father, Dasharatha married to Koualya, a princess of Kosala. As Koualya had not born him any child, he selected beautiful Kaikeyi, daughter of Ashwapathi, Lord of the Kekayas. The years passed, but Kaikeyi too failed him. Dasharatha remained unhappy. His wishes to see his son made him for a quick decision to wed Sunitra, the gentle princess of Magadha. He was sure she would bear a son for him. Marriage took place. Months passed. Sunitra too remained a barren wife.

Disappointed Dasharatha decided to perform horse-sacrifice for progeny. Religious masters were consulted
and on their advice sage Rashya-Sringa was invited to perform the 'yaaga' (sacrifice). It was a very grand affair. Many kings of the day were invited to witness the celebration. Painstaking efforts of 'praja' (people) was seen in erecting the sacrificial platform at selected beautiful location. They were under the strict supervision of expert guidance. A new camp city was born which could accommodate thousands of guests of all cadre. Hospitality and entertainment poured to them increased the charm of the affair. In short, exchequer was conveniently utilised for fulfilling the crave of king Dasharatha for a son.

As the sacrificial fire blazed, a being holding a bowl of 'payasa' (a gruel made out of milk, sugar and rice) suddenly emerged from it and asked Dasharatha to distribute 'payasa' among the wives and they would bear sons for him. King acted accordingly. Within a year, all three queens gave birth to sons: Rama was born to Kausalya, Bharatha to Kaikeyi and Lakshmana and Satrugna to Sumitra (she had 'payasa' twice, so gave birth to twins).

Two important characters of 'Mahabharata', Dhritishtadyumna who killed Drona and Droupadi, who lived as wife of five Pandava brothers, were children of kind Drupada, king of Panchalas. In reality Drupada was childless. His story follows as he and Drona as good old friends, studied together in the asrama of Bharadwaja. Drupada in those young age promised his pauper friend to share his kingdom equally once he becomes the king. The promise was
not fulfilled and Drona was insulted in durbar of Drupada, when he approached for his share. Drona revenged back after years. Heartfelt Drupada wanted to kill Drona. Drupada was well aware that Drona had in his possession all the divine astras, and to perish him would be a real task without a dedicated son with the blessings of Almighty. So Drupada decided to perform a 'yajna' for a son to kill Drona and for a daughter to gift to Arjuna, the greatest warrior the world has ever seen. 'Putrakarma' was conducted by two eminent rishis, Yaja and Upajaya. At the end of the yajna, there arose a chariot out of sacrificial fire. Seated in the chariot in the dress of a warrior was Dhrishtadyumna. Then followed a great event. The most beautiful woman of the time, Drupadi (also called as Krishnaa), arose out of the fire. Drupada was speechless with joy. He got a son and a daughter to fulfill his wishes.

Eagerness to have, to play, to share joy with, to live with own child is human. It remains same in royal, ministerial or in a common man's family. Mere consolation of words would not solace them. To suffice with good wishes, barren couple is sent to different physicians and holy places. Superstitious believes bud up. In the name of worship huge money is spent for unbelievable superstitious causes. In fact, childless couples are ready to sacrifice everything for their own child!

Modern world is no different in superstitious believes. There are temples, churches and mosques which
proclaim to do the needful to barren women. In the suburban area of Bombay, a temple is present. Idol of Lord Shiva is worshipped there. Lord Shiva is represented by his phallus, 'linga'. The infertile woman, to have a child is proposed to rub her vagina on Shiva linga. The sari, the costume of Indian women is very convenient for her worship. A western writer has pointed out, "after years of rubbing the rough rock has turned glass smooth".

St. Anne's Church in Batim, Goa is very famous for bestowing children to barren women. This was the first church built by Portuguese in India. In the month of August, childless women worshippers, reach St. Anne's church with cucumber in hands chanting "toma meu pepino, dai - me um menino". They pray for blessing with a child in exchange of cucumber. Before they leave the church a new life is experienced by the internal organs of them and they bear children. No one is supposed to question St. Anne's divine act. But why cucumber and no other vegetable? Does it symbolise the phallic organ? This may not be treated as questioning the sacred saint.

A barren woman of dhangur tribe could be divorced. Before repudiation, sixty 'bhuts' (spirits) are requested to speak and prescribe remedies. A sure cure could be possible by stripping herself to the moon, the mountains and the rivers and beg to them to impregnate her. This scene would be in front of men folk (Dhangur women never show her pudendum to anyone).
Among Hindus, women take turns around 'tulsi' plant, after bath, praying for fertility. 'Shudra' women, dance fully naked in closed room during harvest season, beating copper vessel for the same reason.

No paucity for stories of famous infertile couples and different funny worships, in India, for procuring a descendant. But for brevity avoided here.

Scientifically where do we stand, on this problem?

The most surprising news about infertility was announced in 1975 by World Health Organisation (WHO) (1975). It was organised a scientific group on the epidemiology of infertility. The members discussed the problem in deep from 30th June to 4th July, 1975. The discussion brought to the light a fact that the problem of infertility, at places where they conducted the study (tropical Africa) was very much severe. In parts of Gabon, Cameroon and Central African Republic and Zaire the proportion of women of 50 years of age and older who have never borne children ranges from 20% to 40%. Among younger women the percentage was still worse. A similar situation has been reported from East Africa, the Sudan, and elsewhere in the continent. Such an elaborate study was not conducted anywhere else in the world. Otherwise, perhaps, more unbelievable news would have reached us for our acceptance. Participants of the study agreed "involuntary infertility is a worldwide problem but its incidence varies from area to area. It seems likely that upto 5% of all couples are infertile for complex reasons that
are difficult to diagnose and that present day treatment has proved largely ineffective in dealing with the situation.”

The expert committee had agreed that at several places the rate of infertility may be more than 15%. Belsey (1976) has reported that 40% of women of South Sahara, have completed their reproductive years without bearing a child.

Elaborate studies as given above were not conducted at other parts of the world. When undertaking such studies voluntary childlessnes for various sociodemographic reasons including, delayed pregnancy after marriage, for social status, for economic reasons, for health care, for egalitarianism in familial sex roles, for no normative pressures from elders.....etc. will have to be excluded (Freshmook and Outright, 1973). But it should include the relevant queries regarding the identity of both partners, their marital status, sexual status, cohabitation status and contraceptive practice (WHO, 1975).

The expert committee has agreed on the point that such an elaborate study needed high resources. However, a suggestion made by them should not drain the treasury much. A sample composed of about 300 women of 20-29 years of age, would be sufficient to permit the classification of a community as having an unusually high level of infertility. Each woman would fall into one of the categories (a) infertility (b) unproven infertility (c) pregnancy wastage (d) child loss and (e) fertility. Categories (a) and (b) are important for infertility studies. Infertility can be
either primary or secondary. Primary infertility includes the cases where no pregnancy existed after repeated attempts for a year. In secondary infertility repeated pregnancy is not successful after repeated attempts. Primary and secondary infertility might have been diagnosed earlier. The cases of unproven infertility differ. These cases will have to be studied in detail. All the enquiries recommended will have to be made. An emphasis on cohabitation status and the techniques will have to be done. Many cases reported for infertility turn to be so due to lack of knowledge on the posture of sexual intercourse. These cases can be corrected easily by proper guidance. If this cause is excluded, both partners should undergo the investigations, simultaneously. This can save the time of the couple and to an earlier diagnosis. Wherever the treatment is necessary it has to be advised. Some cases which are found to be hopeless may be informed accordingly rather than attempting to improve them. Such false treatment can lead to perpetual expectation of the goal and at a stage can harm the couples' psychology.

Since the end of the 1950's fertility rate had been falling very fast in Quebec, Canada. An enthusiastic author, Festy (1976), undertook a survey to find out the probable reasons for it. The study showed that the births were concentrated in the beginning of married lives at earlier times. Massive propaganda on family planning to delay the pregnancy was the main reason for this fall in fertility (though erroneously). This study shows the importance gained by family planning as well, the initiation taken
by Feesty to conduct such a study to root the cause of low birth rate is highly appreciable.

Isolated surveys are conducted at different places on infertility. Thus from U.S.A. it was reported that 60% of the population reported for sterility belong to primary ground and the remaining 40% to the secondary ground (De Krester, 1974). This value was 73.5% and 21.5% respectively in case of Japanese (Rin et al. 1975). Such surveys are not conducted in general in our country.

Husband or wife or both remain causality of infertility and the conditions are termed accordingly male infertility or female infertility. The present work is strictly restricted on the male partners.

MALE INFERTILITY

Various authors have concluded their study on male infertility each proposing a new factor as a cause of it. Each factor led to more confusion of our existing complex knowledge.

Male infertile patients are not a negligible number. A study conducted in U.S.A. shows that 30% of the total cases of infertility reported proved to be due to male factor (De Krester, 1974).

The present study was extended to find out the percentage of male factor responsible for infertility cases reported to Civil Hospital, Ahmedabad. We follow the method of investigating husband and wife simultaneously. The
available records of 94 months starting from January 1963 to June 1980 show a total number of 6613 male partners were screened for the same. Out of which 358 (12.96%) discontinued to attend hospital for further investigations. With the present knowledge about semen analysis 2009 (30.36%) were found to be not responsible for childlessness. The remaining 56.63% was responsible either singly or with partner for infertility. Year wise distribution of the cases is shown in figure 1. The percentage (56.63) seen in this study is quite high when compared to the reports of others. This is sufficient to open the eyes of the authorities, clinicians, surgeons, urologists, gynecologists, andrologists and research workers as far as the seriousness of male infertility is concerned. This report emphasises for proper studies in this line, to find out the cause of male infertility and the necessity to correct the root cause and thus make the family happy.

Routinely after the general examination, male partner is advised to submit the semen sample for investigation. Semen analysis gives a correct picture of the function of testes. A detailed study can definitely prove whether adnexal glands are also functioning or not. The secretion of the adnexal glands is considered as important for survival and motility of spermatozoa. Various factors are found to be responsible for the normal motility. Experimentally it was found that different factors affect the sperm motility. It was further shown that many substances present in the seminal plasma are responsible for the altered sperm motility.
Figure 1. DISTRIBUTION OF THE SEMEN VARIETIES IN CIVIL HOSPITAL, AHMEDABAD
The study group of World Health Organisation has correctly pointed out that the correct treatment on infertility is not always possible because of the lack of diagnosis. Diagnosis becomes impossible because of our improper knowledge on the system. This study is aimed to contribute to the basic knowledge of semen.

Analysis of semen is being improved by many workers. An attempt is done in the present study to find out if any correlation existed between the total sperm count and the percentage of sperm motility of a semen sample.

It is most desirable to establish the normal value for sodium, potassium, zinc, copper and iron in the normal seminal plasma. Attempt has also been made to study the difference in concentration of all these elements in different pathological groups and work out the contribution of each element in the sperm motility.