

TESTICULAR ORIGIN AS MENTIONED IN HOLY KORAN. MODERN MEDICINE AND MANAGEMENT OF UNDESCENDED TESTIS

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There are many fascinating correlations between medicine and our Holy Book. The origin of the human being is mentioned in detail. The origin of the testis was described many years before modern medicine mentioned it. It is important to understand the origin of the testis as described in the Holy Koran and in modern medicine in order to have a rational approach for the management of undescended testis (cryptorchism).

MATERIALS AND METHODS:

Reading the Ayat number seven in the Sourat "Al-Tareq" in the Holy Koran¹ you will find the place of origin of testis in the human body. The Ayat is written as follows:

يُخْرِجُ مِنْ بَيْنِ الصُّلْبِ وَالرِّبِّ ۝٧
خُلِقَ مِنْ مَّاءٍ دَافِقٍ ۝٨

This Ayat means that the site of the testicular origin is at the junction of the lower rib and the lumbar spine. The testis then descends from that position to the scrotum. Some children are born with an empty scrotum; for this group of patients localization of the undescended testis and subsequent management is mandatory. Standard orchipexy as was described by Gross and Jewett² can be applied for most children. In difficult situations LaRoque Maneuver is reported by Hartman et al³ and Long Loop Vas Technique as described by Fowler and Stephens⁴ can be utilized. Three children with high undescended testis (cryptorchism) were seen by us where the standard orchipexy was not helpful. An improved technique was used in these children. A separate transverse abdominal extraperitoneal muscle splitting incision was made parallel to the groin incision. The dissection was carried out anterior to the psoas major muscle up to the inferior pole of the kidney and up to the junction of the lower rib and the lumbar spine as described in the Holy Koran. This approach was successful in finding the testis and its vascular pedicle. Therefore, we recommend this approach for difficult

situations of undescended testis.

DISCUSSION:

In 1786 John Hunter⁵ published a book and described for the first time in medical literature the entity of undescended testis. Denis Browne⁶ made a revolutionary contribution to the understanding of the undescended testis. But this anomaly was not fully understood until Wyndham⁷ described in some detail the embryology of the testis in 1943. The testis arises in the embryo from the medial portion of the urogenital ridges at the level of the diaphragm. He found that in a two centimeter embryo the testis was already in the lower abdomen near the groin. The testis is pulled to the scrotum by a ligament termed the gubernaculum by Hunter.⁵ This descent takes place as reported by Arey⁸ at the beginning of the seventh lunar month. The incident of incomplete descent of the testis at birth as reported by Scorer⁹ is thirty percent in premature infants and three and one half percent in full term babies. He⁹ also has shown that eighty-two percent of the neonates with undescended testes will have full descent within the first year of life. For those children with persistent undescended testis, a treatment is recommended because of the many complications developed secondary to the abnormally located testis. Sterility was reported in 100% of adult cryptorchism by Hansen¹⁰. Kiesewetter¹¹ reported an incident of associated hernia in 97.7%. Torsion is common as emphasized by Smith¹². Gross and Jewett² who calculated that the incidence of testicular malignancy in the undescended intra-abdominal testis is thirty to fifty times greater than in patients with descended testis.

A variety of treatment methods were discussed for children with undescended testis. Godadotrophic hormones were used with varying degree of success (15-66%). This was reported by Burnet, et al¹³. Sieber, et al¹⁴ designed a protocol, which we use at our institution for undescended testis. In unilateral undescended testis, no hormone is indicated which in bilateral cryptorchism a six to ten week course of bi-

weekly parenteral chorionic gonadotropin is given. Surgical intervention is indicated in children with unilateral or bilateral undescended testes where hormonal treatment proves unsuccessful. The timing for surgical treatment is between the age of three and five. Nelson¹⁵ described little historical difference in the undescended and descended testis in boys before the age of six. In boys between the age of six and eleven, the difference is apparent and the number of spermatogonia was decreased. In boys of twelve and above, the difference was great. Preoperative localization of the undescended testis can be of great help to the surgeon. Selective spermatic arteriography for localization of an impalpable undescended testis was reported by Khademi, et al¹⁶ from our Institution and we use it frequently. Testicular scan was used postoperatively occasionally by to evaluate the results of orchiopexy. Intravenous pyelogram was used in selected cases with bilateral and undescended testes.

A variety of techniques of orchiopexy have been described in literature. We utilize the technique described by Gross and Jewett² where the testis is placed in a pouch in the scrotum between the scrotal skin and the dartos muscle. In high undescended testis, an extra length of the testis and its vascular pedicle can be created by extending the groin incision laterally, then muscle cutting of muscle splitting of the internal oblique and transversalis as described by Hartman, et al.³ A modified technique was used by us in three children as described earlier.

SUMMARY:

The origin of the testis was described in the Holy Koran 1330 years prior to any reporting in the modern medicine. Early management of undescended testis is important. Orchiopexy should be started by groin incision. If the testis cannot be located, a separate transverse abdominal extra-peritoneal muscle splitting incision is made. This incision can help the surgeon to trace the testis to its origin near the diaphragm as described in the Holy Koran.

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