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RESEARCH ARTICLE

SCREENING OF UNDESCENDED TESTES AMONG CHILDREN AGED 6- 14 YEARS

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ABSTRACT

Cryptorchidism is the most common genital problem encountered in pediatrics, it carries the risk of testicular cancer, infertility and psychological upset. In Iraq the screening of undescended testes (UDT) after child birth is not routinely done that will cause a lot of cases remain undiagnosed till after child and adulthood. 319 primary school randomly selected all over Baghdad city including urban and rural regions for screening males with undescended testes among children aged 6-14 years. Exclusion criteria include those who are treated previously from this anomaly, and those who refused examination to inter the study. A total of 184,852 pupils aged 6-14 years were examined During year 2015(from 15 November 30 April), 3910 pupils (2.11%) were found to have undescended testes. The prevalence of cryptorchidism among our primary school children in Baghdad city is nearly 2 % in urban area and 2.4% in rural area and the result of this mass screening aware us to go forward in order to engage this problem in our early detection program for cancer prevention.

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INTRODUCTION

Cryptorchidism is the most common genital problem encountered in pediatric, The term is applied to developmental defect characterized by failure of one or both testes to descend into the scrotum and remain in the inguinal canal, it was first described by Hunter in 1786. Cryptorchidism is the most significant risk factor for testicular cancer increasing the risk 2.5-11 fold (Benson, 1991). In addition it is a known risk for infertility, torsion and psychological upset. Cryptorchidism show familial clustering and increases in first degree relatives, suggesting that genetic and/ or environmental factors, maternal hormones, geographical variability may contribute to the etiology (Schnach, 2008 and Chacko, 2009). In western countries almost 3% of boys are operated on for cryptorchidism. International trends suggest that the rate of cryptorchidism, together with other anomalies of male development such as hypospadias and testicular cancer, may be increased (Giwercmann, 1993).

Objective : The aim of our study is to screen for undescended testes among pupils aged 6-14 years randomly selected from primary schools of Baghdad during year 2015 (Table 1, Figure 1). This study done as part of Iraqi cancer board strategy for prevention of cancer diseases among our population. All discovered cases had been send to specialist urology of nearest hospital for farther investigation and treatment. So our objective was not only screening but also diagnosis and treatments.

METHODOLOGY

On 2015, A (72) primary healthdoctors who engaged in this study to detect clinically what is called undescended or ectopic testes, All doctors who are involved in this study attend a course about the ideal way of clinical examination to detect undescended testes and how to differentiate it from retractile testes which consider normal anomaly. This course has been done by specialist urology doctor. The cross sectional study involve 184,852 children aged 6-1 4 years disrepute on 319 primary schools around all- over Baghdad city(urban and ruler regions). Pupils were placed in frog leg position for examination and the testes milked down to the scrotum to eliminate the possibility of retractile testes. Examination of students done inside their school in a room prepared before one day for this purpose. Permission was sought from ministry of health, ministry of education and Ethical committees of technical matter.

RESULTS

A total of 184,852 pupils aged 6-14 years were examined During year 2015 (from 15 November—30 April), 3910 pupils (2.11%) were found to have undescended testes (UDT) (Table 1, Figure 1) 1468 of them (37 %) were right sided, 1273 of them (33 %) were left sided and 1169 cases (30%) were bilateral testes which need farther investigation such as ultra sound, MRI, or even laparoscopy for diagnosis (Table No. 2, Figure No. 2).

Table 1. The Percentage of UDT in Baghdad City of Year 2015

Numbers	Total No.
Number of Screened Children	184852
Number of Cases of (UDT)	3910
The Percentage Case	2.11%

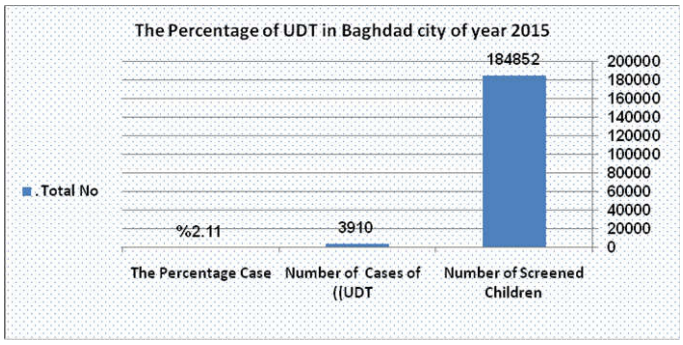

Figure 1. The percentages of UDT in Baghdad city of year 2015

Table 2. Location of missing Testes

Site	No.	%
Right	1468	37%
Left	1273	33%
Bilateral	1169	30%
Total	3910	100

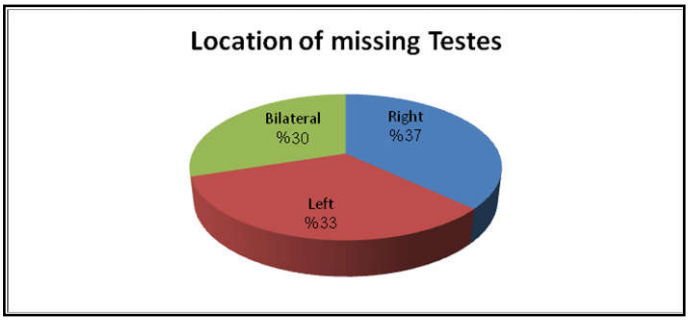

Figure 2. Location of missing Testes

In the rural area of Baghdad (Al-tarmea, Al-tagi, Abo grabe, Al -mahmodea, Al esteglal) the prevalence of undescended testes were slightly increased compared with the center of Baghdad to reach 2.43% (Table NO.3, Figure No.3).

Table 3. The Prevelance (UDT) in Rural Area of Baghdad

Sector	Screened No.	No. of Cases	%
ALmhmodih	8325	403	
ALastqlal	10966	149	
Altaji	7585	222	
Altarmyh	6739	87	
Abo Graibe	2707	20	
Total	36322	881	2.43

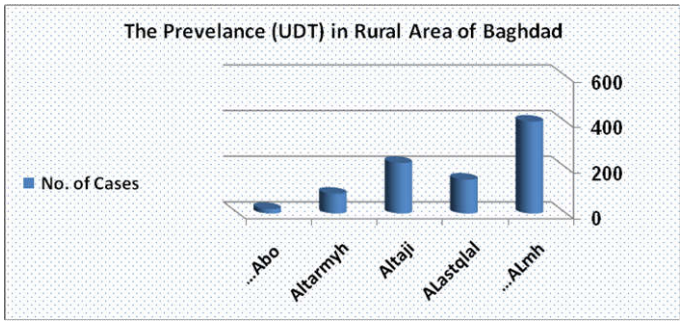

Figure 3. The prevelance (UDT) IN rural area of Baghdad

DISCUSSION

Undescended testes are found in 3% of full term male infants and 33% of premature babies at birth (Mourquand, 2008). It is the most common birth defect in boys affecting 4-9% of newborns and 1-2% of boys 1 year of age (Schnach, 2008). In united states, the prevalence of Undescended testes 3.7 at birth to 1.1 from age of one year t o adult hood, the decline in incidence is explained by the fact that most cases of Undescended testes which are diagnosed at birth descend spontaneously to the scrotum during the first 9 months of life due to brief increase of endogenous testosterone secretion. In addition significant number of cases were retractile testes rather than cryptorchidism (Hughes, 2008 and Mother, 2009). Cryptorchidism was identified in 1.5—4 % of fathers and 6.5 % of brothers of patients with this anomaly supporting the genetic factor as one of the causes of this anomaly (Yuceran, 1993), pupils of age group between 6-15 years IN LOCAL ARAB POPULATION IN LIBYA between March and April 2001 found that the prevalence of cryptorchidism was about 2.3% (Pamenter, 2003). In our study the prevalence of cryptorchidism was 2.11% among schoolboys aged 6-14 years, higher in the right 37% than the left 33% and the right to left ratio was 1.12 / 1. 30% of cases were bilateral and in most of them the both testes were impalpable and need farther investigations such as ultrasound, MRI, Laparoscopy, or even Laparotomy in order to localize the missing testes (Runack, 2003 and Mengele, 1974). Serum Gonadotropin estimation is useful for assessment of gonad function when the testes were undescended in both sides.

All discovered cases were send to the nearest hospital for farther investigation and management. The major effect of undescended testes in addition to infertility and psychological upset are malignant degeneration of testicular tissue (Pick, 1986). To date ,only cases persisting until the age of one year had been considered a risk factor for testicular cancer, several authors now believe that any form of cryptorchidsm at birth, regardless of the outcome, should be considered a risk factor for testicular cancer (Regendaran, 2002). The depressed spermatogenesis affect not only the undescended testis but also the normally descended one and this will appear if surgery was not undertaken before the age of two years (14,15), for this reason it is now accepted that the surgical repositioning of undescended testes should be before the age of two (Regendaran, 2002 and Hach, 2003). The liability of the undescended testes for malignant changes is not fully understood however the longer the testis remain udescended and the higher the testis from the bottom of the scrotum the more sever the malignant histological changes (Akri, 2008). The incidence of malignant changes my increase 2.5- 11 fold in undescended testes than normally situated one(1).in our study theprevalence of undescended testes is 2—2.4% according to the geographical distribution of Urban and Rural regions in Baghdad city and the difference in prevalence can be explained by the difference in education of the mothers between urban and rural area and the difference in the health services supply between the two region, This high result of undiagnosed and untreated defect among our male children aged 6—14 years is imperative for us to put national strategy for early detection of undescended testes among our new born babies and to check them again after one year to exclude cases which descend spontaneously during this period .All diagnosed cases should undergo surgical correction during the first 2 years of life to

get the best result in protection against malignant transformation and other complication ofthis defect in future.

Conclusion

The prevalence of cryptorchidism among our primary school children in Baghdad city is nearly 2 % in urban area and 2.4% in rural area and the result of this mass screening aware us to go forward in order to engage this problem in our early detection program for cancer prevention.

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