

## Why the difference in prevalence of different hernias between east and west

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### Abstract

The various western medical literature sources State that the commonest hernia in a female is inguinal. Followed by femoral, with peri-umbilical hernias following. However, in Iraq, our figures prove that peri-umbilical Hernias are the commonest hernias in the Iraq female, with both inguinal and femoral hernias lagging well behind . Thus, our Iraqi figures differ tremendously from The figures we read in the western medical textbooks and Journals. A critical approach to why this difference is, with a review of the literature pursued in this article.

### الخلاصة

مصادر الادب الطبي العربية المتعددة تنص على ان الفتق الاربي هو الاكثر شيوعا بين الاناث يتبعه الفتق الفخذي ثم الفتق حول السرة . لكن في العراق ، ارقامنا تثبت بان الفتق حول السرة هو الاكثر شيوعا بين العراقيات الاناث . في حين ان الفتق الاربي والفتق الفخذي يتبعان عن بعد. لذا تختلف ارقامنا العراقية بدرجة هائلة عن الارقام التي نقرأها في الكتب و المجلات الطبية العربية. تحليل حاد لهذا الفرق و اسبابه تتمع في هذا المقال . مع مراجعة الادب الطبي .

### Introduction

Most western medical literature sources state that although femoral hernias are commoner in Female compared to males, it is the inguinal hernia Wich is the commonest hernia in a female ; (1) Peri-umbilical harnias follow . In Iraq , and many other developing countries, things are different ; the following study is the proof :

### Patients and methods

A retrospective study was done on patients that have attended a private clinic in Baghdad from 1990 to 1994 who were diagnosed as having a Hernia.

### Results

They were 153 cases in all. 112 were males(73.2%),and 41 were females (26.7%)i.e. a male; female of 2.7;1,41.patients (26.7%) were in the third decade of life ,40(26.1%)were in the 5<sup>th</sup> decade , and 24 (15.7%) were in fourth decade of life . A paediatric surgeon certainly sees most hernias in children . 83 patients (54.3%) had inguinal hernias, mostly being males , 41 hernias (26.7%) were peri- umbilical , mostof patients being females.Incisional hernia came third in sequence afflicting23 patients (15.03%). The remaining six patients had rarer types of hernias , with only two, both in females (1.3%)being femoral .

If we take hernias in females only (41cases), the commonest type was peri-umbilical hernia (29cases: 70. 7%),followed by Incisional hernia (7 cases: 17.1%), then three casesof inguinal hernia (7.3%),and two cases of femoral hernias(4.9%). The over-whelming majority of patients in the peri -umbilical and incisional hernias were typically middle aged obese multi-parous ladies.The two cases with femoral hernias were elderly thin females.

### Discussion

A hernia is the protrusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity .Excluding incisional hernias, the western literature puts the inguinal hernia as the commonest external abdominal in both males and females (2), with femoral hernias though being commoner in females coming second in the sequece of external abdominal hernias in females , with peri-umbilical hernias following .However ,in iraq , even without resorting to figures, every surgeon is aware that every single day,many of more periumbilical hernias are discovered . Incidentally on examining abdomens of females that have been pregnant before who present with different abdominal complaints , in addition to females presenting with periumbilical hernias which they noticed or because they gave rise to symptoms , while an inguinal hernia or a frmoral hernia is uncommonly encountered .I myself sometimes go for months without seeing a femoral hernia . These observations are confirmed by the above mentioned figures proving periumbilical hernia to be the commonest external abdominal hernia in the Iraqi female, then comes the inguinal hernia which is followed by the femoral hernia. Why this is marked difference in the prevalence of various external abdominal hernias between east and west? We think we may have the answer! Obesity is a major, Actiological factor. Fat is a well known weakening element acting as a pile-driver separating muscle bundles and layers and weakening aponeuroses favouring peri umbilical , direct inguninal , and hiatus hernias . Since obesity in middle aged multiparous Iraqi females is common, it is but expected that periumbilical hernias are common. The western middle aged lady perhaps is more keene to remain slim , and reduce any weight gains .Multiparity is another important aetiological factor .Iraqi females are commonly multi-parous , the repeated pregnancies stretching the abdominal wall muscles over many months , with local pressure on them as well due to increased intrabdminal contents by the gravid uterus will produce weak flabby abdominal walls which easily and commonly hernitate . The short time - intercal between succeeding pregnanceis before stretched and compressed abdominal wall muscles regain their strength , and the failure of the majority of Iraqi femles to do abdominal wall exercises following delivery due to ignorance even when advised to do these exercises by their doctor contribute strongly to the frequency of peri -umbilical Hernias in Iraqi multiparous middle aged females.In the west , the big problem of dwindling birth rates is a headache for governments planning for the future .The western female may not deliver , or deliver on two children , in comparison with the half or one dozen brought by a middle aged Iraqi female

specially in rural areas. Spacing pregnancies and practicing exercises strengthening the abdominal wall muscles by the more figure-conscious western lady help the abdomen to regain its strength and thus avoid hernias. Another very important factor is the strenuous work of the Iraqi female. Iraqi females specially in rural areas do most of the strenuous work when the dominating male is recreating. She cares for the house and clean it, cook, take care of her children, may bring water for the house if there are no water pipes; She also work in the farm, feed the chicken and animals, lifts heavy weights, etc., and since a powerful muscular effort is a cause of hernia, this daily strenuous work increasing intraabdominal pressure in an abdomen already weakened by obesity and repeated pregnancy explain why periumbilical hernias are so common in middle aged multiparous Iraqi females. Supra umbilical hernias are commoner than infraumbilical hernias<sup>(3)</sup>, this is because the superior are of the umbilical ring is the weakest area in the ring, thus is the most liable area to give way. periumbilical hernias are commonly irreducible due to present adhesions within a multi-locular sac<sup>(4)</sup>. they are treated by Mayo's repair though. I personally have found that repair by edge to edge approximation using number one nylon suture is very satisfactory and have been using this type of repair routinely for years. I used to excise the umbilicus in most cases, but converted to an umbilicus conserving - policy in most patient over the last few years without any higher wound infection rates. a femoral hernia can not be controlled by a truss, and it is the commonest hernia to strangulate (risk of strangulation: 30-40%) due to the narrow neck of the sac and the rigid femoral ring<sup>(5)</sup>. our two cases were elderly thin females as is the case in western countries usually. The predisposing anatomical features for femoral hernia is the small empty space between the lacunar ligament medially and the femoral ring laterally (femoral canal)<sup>(6)</sup>. The reason why femoral hernia is commoner in females who have had previous pregnancies (double non-pregnants) is femoral ring dilatation by physical and biochemical change during pregnancy, with laxity of abdominal muscles and ligaments<sup>(7)</sup>. It is hypothesized that pressure from the gravid uterus on the external iliac vein may stretch the coverings around the femoral canal. After decompression of the vein, laxity exists in these tissues<sup>(8)</sup>. Another identified cause in some people is the insertion of the ilio pubic tract into the pectineal line of the pubis is narrower than normal causing a wide femoral canal at the upper margin<sup>(9)</sup>. Most reports state that femoral hernias are commoner on the right side, although this was not the case in our two patients, however, two patients are too small a number to make conclusions. The right leg being used more in severe exercise may be one explanation. For all types of hernias, a connective tissue abnormality may be involved in adult onset ones. Abnormalities in the ultra-structure and the physico-chemical properties of collagen in patients with direct inguinal hernias suggest that the hernia is one manifestation of a generalised abnormality in collagen metabolism.

## Conclusion

The incidence of different hernias vary geographically. Inguinal hernia is the commonest hernia in western females with femoral hernia being the second most common type although femoral hernias occur in females more than they do in males. In Iraq, peri-umbilical hernia is the commonest hernia in females. Differences between Iraqi and western ladies including weight, pregnancies, work and life style are mainly responsible.

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