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قال تعالى:

(وَقُلُوبٌ أَدْخِلِي مُدْخَلَ صِدْقٍ وَأَخْرِجِي مُخْرَجَ صِدْقٍ وَاجْعَلْ لِّى مِنْ لَدُنْكَ سُلْطَانًا  
تَّصِيرًا)

صدق الله العظيم

سورة الإسراء الآية (80)

# Dedication

To my parents

To my beloved daughter

To my sister

To my husband

To all people who help me

# Acknowledgement

Thanks and blessing to ALLAH, for his guidance toward conclusion of this thesis.

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## Abbreviation

|       |   |
|-------|---|
| BPH   | Benign prostate hyperplasia             |
| DHT   | Dihydrotestosterone                     |
| BOO   | Bladder outlet obstruction              |
| LUTS  | Lower urinary tract symptoms            |
| AUR   | Acute urinary retention                 |
| TURP  | Transurethral resection of the prostate |
| cm    | centimetres                             |
| gm    | gram                                    |
| b-FGF | basic fibroblast growth factor          |
| Fig   | Figure                                  |
| PSA   | Prostatic specific antigen              |
| DHT   | Dihydroxysterone                        |
| STD   | Sexual transmitted disease              |
| HN    | Hydronephrosis                          |
| PSA   | Prostatic specific antigen              |
| BUN   | Blood urea /nitrogen                    |
| TUR   | Transurethral resection                 |
| TRUS  | Transrectal ultrasound                  |
| ml    | millilitre                              |
| MHZ   | Mega hertz                              |
| V     | Volume                                  |
| L     | Length                                  |
| H     | Height                                  |
| W     | Weight                                  |
| c     | constant                                |



## Abstract

The study was done to evaluate the incidence of the benign prostatic hypertrophy among an elder patients, and reveal the relation between benign prostatic hypertrophy and the volume of the residual urine. The example of 50 Sudanese patients aged between (49-90years) were include I the study ,normal people and patient aged less than 49y were exclude .All the patients were examined by U/S using convex probe of frequency3, 5MHZ. All examinations were obtained in supine position, pre and post voiding in both longitudinal and transverse scans .The prostate volume was measured in cm , and the volume of residual urine was evaluate and measured in ml The results showed that ( 26%)of the residual urine the more frequent (13) with residual urine volume (50ml),and less percent (2%) with

Residual urine volume (70ml).The result showed relation between the patient aged and prostate volume, thus the prostate gland volume is increase with increasing age. Also there is significant relation between the volume of residual urine and prostate volume, thus the prostate gland volume increase with increasing the residual urine volume. Also there is significant relation between the prostate volume and both cystitis and calcification ,with cystitis (0.037) ,calcification(0.000).

The prostate is main cause of obstruction of the bladder neck or narrowing of the urethra passage. Finally Transabdominal U/S scanning should be used in evaluation of prostatic enlargement in very elder patients because it is being saved, non invasive, cheap, unconsumed time, accurate and easy to operate. Any Ultrasound department should be supplied by Diuretics to achieve quickly and perfect scanning for prostate gland and bladder.

## الملخص :-

قامت هذه الدراسة لتقييم حالات تضخم البروستاتا الحميد بين المسنين والكشف عن العلاقة بين تضخم البروستاتا الحميد وحجم البول المتبقي .وقد تم فحص خمسين حالة تتراوح اعمارهم بين ( 49 - 90 سنة ) وقد تم استبعاد الاصحاء و دون 49 سنة من العمر . وتم فحص جميع المرضى بواسطة جهاز الموجات فوق الصوتية ذو تردد 3, 5 ميغاهيرتز كل الفحوصات تمت في وضعية الاستلقاء قبل وبعد التبول وقد اجريت الفحوصات بطريقة طولية وعرضي تم قياس حجم البروستاتا بالسنتيمتر المكعب وتم قياس البول المتبقي بواسطة المل متر.وقد وازحت النتائج ان (26 % ) هي اكبر نسبة في عدد المرضى ذوي متبقي حجم البول مساوياً 50 مل والذين بلغ عددهم 13 خالة من جملة مجتمع الدراسة و 2 % اقل نسبة متبقي بول 70 مل واتضح من الدراسة ان هناك علاقة بين عمر المريض وحجم تضخم حيث يزداد حجم البروستاتا مع زيادة عمر المريض.كما ان هناك علاقة واضحة بين حجم البول المتبقي وحجم البروستاتا حيث يزداد حجم البول المتبقي وفقا لزيادة حجم البروستاتا ايضا هناك علاقة بين حجم تضخم البروستاتا ونسبة التهاب المثانة ورواسب الكالسيوم بنسبة 0.037 ، نسبة ترسب كالسيوم 0.000

تضخم البروستاتا هو السبب المباشر في اغلاق عمق المثانة وتضييق مجرى البول اخيرا استخدام الموجات الصوتية للبطن في تقييم حجم تضخم للبروستاتا خاص في ذوي الاعمار المتقدمة جدا. وذلك لانها اكثر امانا واقل تكلفة ولا تسنفذ الوقت إضافة الى دقتها وسهولة ادائها ،يجب تزويد مراكز الموجات فوق الصوتية بمررات البول حتى تؤدي مسحا دقيقا وسريعا لغدة البروستاتا والمثانة معا .