I dedicate this research to:
My parents, wife, sons, family,
&
Friends

Acknowledgement

I’m so grateful to those individuals
Who

Played apart in preparing this book, thank to my family who always encourage and supporting me.

Bader

Abstract
High-resolution real-time ultrasonography serves as an important tool for Differential Diagnosis Ultrasound of Renal Cyst.

The wide range of causes of renal cyst demands ultrasound evaluation.

In this study, we present a broad overview of the subject, with discussions of the wide series of causes of renal cyst and descriptions of the ultrasonographic findings and those of correlative imaging studies when needed. The accuracy of diagnosing renal cyst using ultrasound in this study was 94%, and it is highly accurate in differentiating.

The study include 100 patients, above 50 age. Ultrasound examination was done, include all abdominal organs (liver, G/B, CBD, pancreas, spleen, portal vein, kidneys, and pelvic organs).

50% of the patients got renal cyst, 11% of the patients. Ultrasound reveal normal appearance.
ملخص البحث

إن أجهزة الموجات فوق الصوتية الحديثة تعتبر وسيلة أساسية في تشخيص حالات التكيس الكلوي بمختلف أشكالها وأسبابها.

كما تلعب دوراً بارزاً في التمييز بين هذه الأسباب والتعرف بين التكيسات الكلوية بفاعلية عالية، ونسبة لتعدد أسباب التكيسات وأنواعها، وقمنا بتقسيم واسع لكل أنواع التكيسات متناولين ذلك بالتحليل والمناقشة لدور الموجات فوق الصوتية في التمييز بين هذه الحالات وتقييمها. حيث أثبتت الدراسة فعالية عالية بلغت 94% في تشخيص حالات التكيسات، وفعالية عالية جداً في التمييز ما بين أنواعها المختلفة.

اشتمل البحث على خمسة أبواب يحتوي الباب الأول على مقدمة عن الدراسة والأهداف ومدة الدراسة والطرق والوسائل والمواد التي استخدمت في الدراسة. في الباب الثاني تناول البحث الإطار النظري وشمل ذلك تشريح الجهاز الكلوي ووظائف الكلى وتعريفها والتقنية التي استخدمت في الفحوصات بالموجات فوق الصوتية.

أما الباب الثالث تناول عرض الحالات من حيث العمر والجنس وتوع أجهزة الموجات فوق الصوتية التي استخدمت. الباب الرابع احتوى على النتائج التي توصلت إليها الدراسة، وتحليل البيانات.

تناول البحث الخامس والأخير في هذه الدراسة المناقشة وخلاصة البحث وتوصيات البحث وقائمة المصادر والمراجع.
# List of Contents

Dedication  
  i  

Acknowledgement  
  ii  

Abstract  
  iii  

الخلاصة  
  iv  

List of contents  
  v  

List of figures  
  vii  

List of tables’  
  ix  

## Chapter One

Introduction  
  1  

Hypothesis  
  1  

Objectives of the study  
  2  

Thesis outline  
  2  

## Chapter Two

Literature Review
Chapter Three
 Methodology
 30

Chapter Four
 Section One
  Results of the study
   43
 Section Two
  Discussion
   52

Chapter Five
 Conclusion
  57
 Recommendation
  58
 References
  59
 Appendix
  62
# List of Figures

<table>
<thead>
<tr>
<th>No.</th>
<th>Figure caption</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Figure 2.1 shows the Anatomical structures of the Urinary Tract of Human</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Figure (2.2) the anterior surfaces of the kidneys, showing the areas of contact of neighboring viscera (4).</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Figure (2.3) Posterior abdominal wall after removing the peritoneum, showing kidneys,</td>
<td>6</td>
</tr>
</tbody>
</table>
suprarenal capsules, and great vessels (4).

4 Figure (2.4a) showing the longitudinal section of the left kidney.

5 Fig (2.4b) this diagrams shows the internal structure of the kidney.

6 Figure 2.5 shows components of the nephron.

7 Figure 3.1 shows the U/S longitudinal Survey (Sagittal Plane) from Anterior Approach.

8 Figure 3.2 shows the U/S longitudinal survey with a probe moved medial and inferior.

9 Figure (3.3) shows the U/S longitudinal scanning with rocking of the probe to right and left with medial.

10 Figure (3.4) shows the longitudinal scanning to determine the Kidney laterally.

11 Figure (4.5) Coronal U/S survey of the right kidney instead of longitudinal.

12 Figure (3.6) shows the U/S Transverse Survey (Transverse Plane) - Anterior approach.

13 Figure (3.7) shows U/S transverse scanning to find the mid-portion and hilum of the kidney.

14 Figure (3.8) shows the U/S transverse scanning to find the inferior pole of the Kidney.

15 Figure (3.9) shows the right Kidney image in longitudinal and transverse scan.

16 Figure (3.10) shows the Longitudinal Survey for the left Kidney.

17 Figure (3.11) shows the approach of transducer angulations to visualize the left Kidney.

18 Figure (3.12) shows an approach to visualize the pole of the left Kidney.
19 Figure (3.13) shows an approach to visualize the posterior portion of the left kidney
20 Figure (3.14) shows an U/S approach to evaluate the entire left kidney
21 Figure (3.15) shows an U/S approach to visualize the transverse section of the left kidney
22 Figure (3.16) shows an alternative approach to visualize the transverse section of the left kidney
23 Figure (3.17) shows an U/S approach to find the mid-portion and hilum of the left kidney (The renal artery and vein)
24 Figure (3.18) shows an U/S approach to visualize the inferior pole of left kidney
25 Figure (3.19) shows the longitudinal and transverse sections of the left kidney
26 Figure (5.1) shows the distribution of renal cystic patients based on their gender.
27 Figure (5.2) shows the distribution of Renal Cyst patients based on their ages Table (5.3) shows the distribution of Renal Cyst patients based on their Symptoms and signs in 100 patients investigated.
28 Figure (5.3) shows the distribution of Renal Cyst patients based on their Symptoms and signs in 100 patients investigated Figure.
29 Figure (4-4) shows differential diagnosis diseases of kidney through 100 patients.
30 Figure (4-5) Show different location of simple renal cyst through 89 patients
31 Figure (4-6) Show cystic criteria through 89 patients scanned.
Figure show different sizes of simple renal cyst through 89 patients scanned.

Figure (4-8) Show Concomitant sonographic abnormalities through 89 patients scanned.

List of Tables

<table>
<thead>
<tr>
<th>No.</th>
<th>Table caption</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tables 2.1 Differential diagnosis of renal mass</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Table 2-2 shows the common renal cystic disease</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Table (5.1) shows the Renal Cyst patients distributed on their Gender in Frequency Percentage</td>
<td>43</td>
</tr>
<tr>
<td>4</td>
<td>Table (5.2) shows the distribution of Renal Cyst patients based on their ages.</td>
<td>44</td>
</tr>
<tr>
<td>5</td>
<td>Table (5.3) shows the distribution of Renal Cyst patients based on their Symptoms and signs in 100 patients investigated.</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>Table (4-4) shows differential diagnosis diseases of kidney through 100 patients.</td>
<td>46</td>
</tr>
<tr>
<td>7</td>
<td>Table (4-5) Show location of simple renal cyst through 89 patients.</td>
<td>47</td>
</tr>
</tbody>
</table>
Table (4-6) shows cystic criteria through 89 patients scanned.

Table (4-7) shows the Cyst Size Distribution among the study sample of Renal Cyst Patients.

Table (4-8) shows concomitant sonographic abnormalities through 89 patients scanned.