

# **Dedication**

**To my parents for their life  
long love and encouragement.**

**To my sisters and brother,  
whose love, support and  
people make every thing  
worth while.**

**To my friends and all people  
that I love, whose they  
support is the foundation on  
which I pursue my academic  
aspiration.**

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**support until I complete this work**

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## الخلايا

أجريت هذه الدراسة في السودان (مستشفى العلاج بالأشعة والطب النوى- الخرطوم ) لتقييم فعالية فحص الرشف بالإبر الدقيقة للخلايا (FNAC) في تشخيص أورام الغدة الدرقية مقارنة بالفحص النسيجي بالسودان، وأيضاً تقييم وتحسين جودة الفحص الرشف بالإبر الدقيقة للخلايا (FNAC) وذلك بمقارنة بين الأصباغ المستخدمة بالفحص (صبغة البابنکول - صبغة الهارس هيماتوكسلين - صبغة المايد قروندي جيمسا) وذلك للفترة (من ديسمبر 2004- ديسمبر 2005). وقد أجري هذا البحث على 108 مريض .

ووجد أن فحص الرشف بالإبر الدقيقة (FNAC) له درجة حساسية (sensitivity) تبلغ 83.3% وخصوصية (specificity) تبلغ 100%. في التمييز ما بين الحالات الخبيثة والحميدة. ووجد أن نسبة حالات الغدة الدرقية الحميدة تبلغ 96.3% ونسبة حالات الغدة الدرقية الخبيثة تبلغ 7.3%.

ووجد إن متوسط أعمار المرضى هذه الدراسة يبلغ 38.2 سنة ، ومعدل المرض عند النساء أعلى نسبة من الرجال حيث تبلغ 87% ، كما وجد إن المنطقة الغربية من السودان هي المنطقة الأكثر انتشاراً للأمراض الغدة الدرقية وتبلغ 35.2% ، أما قبيلة البقارة فتمثل القبيلة الأعلى إصابة بأمراض الغدة الدرقية وتبلغ 27.8%.

أظهرت صبغة البابنکول وصبغة الهارس هيماتوكسلين أفضل نتائج جودة لصبغ الخلية (background & deposit) حيث بلغ متوسط جودتها 90.97%. واتت صبغة المايد قروندي جيمسا في المرتبة الأخيرة وبلغ متوسط جودتها 79.31%.

وأظهرت صبغة البابنکول أفضل نتائج جودة لصبغ نوي الخلايا (nuclear) حيث بلغ متوسط جودتها 94.03% ، وأدت صبغة الهارس هيماتوكسلين في المرتبة الثانية حيث بلغ متوسط جودتها 90.83%، واتت صبغة المايد قروندي جيمسا في المرتبة الأخيرة ، وبلغ متوسط جودتها 86.11%.

وأظهرت صبغة البابنکول أفضل نتائج جودة لصبغ الهيول الخلوي (cytoplasm) وبلغ متوسط جودتها 93.61% ، واتت صبغة الهارس هيماتوكسلين في المرتبة الثانية ومتواسط جودتها 88.75%. واتت صبغة المايد قروندي جيمسا في المرتبة الأخيرة ومتواسط جودتها 83.61%. عليه تأتي صبغة البابنکول في المرتبة الأولى من حيث الجودة العامة لصبغ الخلايا المأخوذة بالرشف بالإبر الدقيقة ثم تأتي صبغة الهارس هيماتوكسلين في المرتبة الثانية والممايد قروندي جيمسا في المرتبة الأخيرة وذلك حسب نتائج بحثنا المذكورة أعلاه .

# Abstract

This study was carried out in the Sudan ( Radiation & Isotopes center- Khartoum) to assess the value of FNAC in diagnosis of palpable thyroid masses and to improve quality of FNAC. A comparison was made between the main three cytological stains ( Haematoxylin and Eosin (H&E) stain, Papanicolaou (Pap) stain and May-Grunwald Giemsa (MGG) stain ). The study was carried on 108 patients during the period from (December 2004 to December 2005).

The study found that FNAC had sensitivity of 83.3% and specificity of 100%, in differentiation between malignant and benign thyroid palpable masses. The benign thyroid tumor conditions were 96.3 % (104 cases). While Malignant thyroid tumors were 3.7% (4cases).

The mean age for our study population was 38.2 years. The females were more than males and they account for 87% of cases. 27.8% of cases were from Bagara tribe Also the major residence was the west of Sudan (35.2%).

The Pap stain and H&E stain showed best stain quality concerning background and deposit .Both had total mean of 90.97% on the other hand MGG had total mean (79.3%).

The Pap stain showed best stain quality concerning nuclear staining with mean of (94.03%). H&E stain came next with mean of (90.83%) and MGG came last with mean of (86.11%).

The Pap stain showed best stain quality concerning cytoplasmic staining with mean of (93.61%) and H&E stain came next with mean of (88.75%). MGG came last one with mean of (83.61%).

The pap stain showed the best total quality for the staining of FNAC .H&E came next and MGG came last according to our results.

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