

Sudan University of Science and Technology

College of graduate Studies

**Detection of Cytological changes associated with
Pulmonary Tuberculosis among patient attending
Port-Sudan teaching hospital
2008 — 2009**

تحديد التغيرات الخلوية المصاحبة للاصابة بالتدرن الرئوي للمرضى بمستشفى
بورتسودان التعليمي في الفترة ٢٠٠٨ — ٢٠٠٩م

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Dedication

To my parents who surrounded me with everlasting love and care

To the soul of my brother Magdi

To my brothers and sisters

To my daughter Reel

To my teachers and my colleagues

To my friends

*And to everyone who gave encouraged me to successful finish this
study*

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ABSTRACT

This case control, hospital base study carried out in tuberculosis department Port-Sudan teaching hospital red sea state, during the period from December 2008 to August 2009. The main objectives were to evaluate the association between tuberculosis infection and lung cancer using cytological techniques, and to compare the cytological appearance of sputum using different method of stains (Papanicolaou , may-Grunwald and Giemsa , haematoxylin and eosin stain). Sputum specimens were 200 samples collected from patient complaining from signs and symptoms of T.B infection and Z.N positive, this group constitute the case 100 sample, control group 100 sample were Z.N negative patient with symptoms of chest infection, The results obtained indicated tuberculosis causes change on the cells we found many cytological changes among case group ranged from metaplastic change 8%, micro nuclear change 64%, and chronic inflammatory changes 28%. The quality of stains was as follows Papanicolaou stain scored the best result compare to the May-Grunwald Giemsa stain, and Harris's Haematoxylin and Eosin, we conclude that according to our finding there was no malignant changes on sputum cytology among tuberculosis patients, we found many metaplastic change which is a pre malignant status the quality of Papanicolaou stain as method for sputum cytology is superior to other cytological stains May – Grunwald Giemsa gives acceptable results. The study recommended to screen T.B patient for cytological abnormalities and to conduct other study with larger sample size to confirm or refute our finding.

ملخص الدراسة

هذه دراسة مستشفوية بين مجموعة الحالة والضبط . واجريت هذه الدراسة بمستشفى بورتسودان التعليمى بولاية البحر الاحمر، فى الفترة من ديسمبر ٢٠٠٨ الى اغسطس ٢٠٠٩ . والهدف الاساسي منها تقييم العلاقة بين الاصابة بالسل الرئوى وسرطان الرئة باستخدام التقنيات الخلوية، ومقارنة المظاهر الخلوية باستخدام اصباغ مختلفة مثل (البابينيكولا و الميقرنولد جيمسا و الهيماتوكسلين و الايوسين) . جمعت ٢٠٠ عينة قشع من مرضى يعانون من اشارات واعراض من الاصابة بالسل الرئوى، وصبغة الزيل نيلسن كانت اجابية لمجموعة الحالة، ومجموعة الضبط بالزيل نيلسن كانت سالبة وكان المرضى يعانون من اعراض اصابات صدرية. وجدت الدراسة انه لاتوجد علاقة ذات دلالة احصائية بين الاصابة بالتدرن الرئوي وسرطان الرئة اعطت مؤشر الي: ان السل الرئوى يسبب تغيير على الخلايا وجد ان هنالك تغير خلوي متعدد علي مجموعة الحالة وهذا التغيير تراوح ما بين تحول خلوى ٨%، تغيير نووى ٦٤% والتهاب مزمن ٢٨%، وجد ان هنالك تغير بين مجموعة الحالة والضبط وحتى تغير في المتغيرات وعلي حسب جودة الاصباغ وجد ان صبغة البابينيكولا كانت اقيم من اليقرنولد جيمسا و الهيماتوكسلين والايوسين. وجدت الدراسة انه لاتوجد علاقة ذات دلالة احصائية بين التغيرات الخلوية وطبيعته العمل ومستوي التعليم والجنس والاعمار والقبائل علي حسب ما وجدناه من هذه الدراسة توصلنا الى انه ليس هنالك اي تغيير سرطانى علي مستوى المصابين بالسل الرئوى في عينات القشع. وكان هنالك تحول خلوى وهو (تحول قبل سرطانى). والباينيكولا كانت اجود وافضل صبغة عينات القشع اكثر من الميقرنولد جيمسا والهيماتوكسلين والايوسين واعطت نتائج مقبولة. ونوصى بعمل مسح خلوي للمصابين بالسل الرئوى لمعرفة التركيب الخلوى الغير طبيعى، بزيادة حجم العينات للوصول لنتائج اشمل.

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