

# بسم الله الرحمن الرحيم

## ملخص البحث

الهدف من هذه الدراسة هو معرفة الأسباب التي تؤدي إلى رفض أفلام الأشعة وإعادة الفحوصات الإشعاعية وذلك في خمسة أقسام من أقسام الأشعة بمستشفى الرياض المركزي بالمملكة العربية السعودية .

في هذه الدراسة تمّ استعراض ، الأشعة وكيفية تكوين الصورة الإشعاعية و جودة الصورة الإشعاعية والعوامل التي تؤثر عليها . كما تمّ استعراض الأسباب العامة التي تؤدي إلى رفض الأفلام وإعادتها في التصوير الإشعاعي العام . هذه الأسباب مثال الأخطاء والشوائب التي تتكون في صور الأشعة .

في هذه الدراسة تمّ تجميع الأفلام المرفوضة وتسجيلها لمدة شهر . وبعد ذلك تمّ تحليل هذه الأفلام وتصنيفها على ثمانية مجموعات حسب أسباب الرفض .

من خلال هذه الدراسة وجدنا أن النسبة المئوية الكلية للأفلام المرفوضة تمثل ( 8% ) وهي نسبة مقبولة بالمقاييس العالمية ، أيضاً وجدنا أن أكثر الأسباب التي أدت إلى رفض الأفلام هي عدم ضبط عوامل التعرض الإشعاعي ( 30% ) يأتي بعدها أخطاء الأوضاع الإشعاعية ( 14% ) ثم بعدها تحديد مركز الإشعاع وحركة المريض ( 24.5% ) . أما تأثير أجهزة التحميص وأجهزة الأشعة فهي أقل الأسباب ( 10% ) وهي نسبة لا تذكر أما بقية الأسباب فهي متعددة ونسبتها جميعاً ( 22.85% ) .

نستخلص من هذه الدراسة أن أكثر من ( 50% ) من أسباب الأفلام المرفوضة يعزى إلى التقنيات والمهارات المستخدمة ، أما تأثير الأجهزة فهو أقل من (10%) ويمكن تقليص عدد الأفلام المرفوضة إلى الحد الأدنى بتقليص أسبابها وذلك بتطبيق برامج تأكيد الجودة المؤثرة والإشراف المباشر والمنظم على تدريب الطلاب والملتحقين الجدد بأقسام الأشعة .

## Abstract

**This** study was undertaken to identify the causes of film rejection in five

X-ray departments at Riyadh central hospital, Riyadh, Saudi Arabia. In this study, I reviewed the X-ray beam and image formation, radiographic quality and the common causes of film rejection in conventional radiography, these causes such as errors and artifacts.

**Rejected** radiographs of conventional film-screen radiography were collected over one month period then counted and recorded. The rejected radiographs and images were analyzed and categorized into eight groups according to the causes of rejection.

**The** overall percentage reject rate (8%) obtained in this study slightly high but it is in the acceptable range. In this study it was found that the exposure (30%) and positioning (14%) errors were the main reasons for rejection.

**The** centering errors (12-7%) were the third cause of film rejection, the fourth reason for film rejection was the patient motion (11.8%).

**Mechanical** influence of equipment and processors was less than 10% and in most departments was negligible. The rest of causes (22-85%) of

rejection were due to many other causes they were grouped together as other causes of film rejection.

**From** this result, it was clearly seen that more than 50% of the rejected films was contributed in particular to techniques and skills employed equipment and processors influence was less than 10%.

**Rejected** films may be reduced to the minimum by reducing their causes, by applying effective quality assurance programs, full students' supervision and adequate regular staff training.

## **DEDICATION**

This work is dedicated to all members of my family specially my wife for her patience continuous support and encouragement.

My sons Ali and Abdul Aziz who helped me in typing and organizing this work.

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