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Dedication

To my mother

To my father

To my brother

To my sisters

To all my colleagues and

Friends

With my best wishes

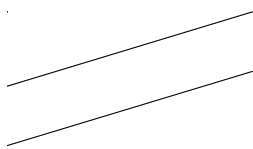


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This is a descriptive study, to show the effect of fixation time (after collection) of urine specimens on subsequent staining quality and preservation of cells were evaluated in 300 smears prepared from 50 urine samples. Three limits of fixation were applied: immediate fixation, fixation after two hours and fixation after four hours.

Of the 50 immediately fixed urine specimens, most of stained smears showed very good staining quality constituting 36(72%) followed by good, excellent and poor constituting, 7(14%), 3(6%) and 1(2%), respectively. Concerning staining quality of urine cells fixed after two hours. Of the 50 specimens, 14(28%) smears have showed well preserved cells, 25(50%) were partially degenerated cells and the remaining 11(22%) were containing completely degenerated cells. After four hours of fixation, the majority containing partially degenerated cells, representing 25(50%) followed by completed degenerated cells and well preserved cells constituting 20 (40%) and 5(10%) correspondingly. The staining quality for immediately fixed smears and smears fixed after 2hours was categorized as, excellent (3 and 0) very good (36 and 1), good (9 and 20) and poor (2 and 20) for both (immediate fixation and fixation after 2 hours) respectively. These findings indicated that the preservation of urine cells as well as their subsequent staining quality deteriorates with time and the difference was statistically significant in each 2hours interval after the immediate time of collection $P < 0.001$. Delay in fixation of urine specimens for

cytological investigations; significantly deteriorate the preservation of cells as well as the subsequent staining quality. Sterility of collection container doesn't seem to affect the preservation and quality of staining, particularly if the preparation is instantly fixed.

الخلاصة

مقدمة: هذه الدراسة أجريت فى المعمل المركزى للصندوق القومى للتأمين الصحى بمدينة الدويم فى الفترة ما بين فبراير وحتى مارس 2009

الغرض: استهدفت هذه الدراسة، مدى تأثير تعقيم حاويات جمع العينات والتثبيت المتأخر لعينات البول، لفحص الخلايا وتأثيره على نوعية نمط الخلايا وتقييم الصبغة المستخدمة، طبقت هذه الدراسة على النساء ذوات الافرازات المهبلية.

الطريقة: فى هذه الدراسة، المستعرضة تم فحص ثلاثمائة عينة او مسحة بول أخذت من خمسين مرأة بمضاعفات افرازات مهبلية مترددات على المعمل المركزى، وهذه العينات حضرت بأستخدام نظام المسحات رطبة التثبيت لصبغة بابانيكولاو.

النتائج: خلصت الدراسة لوجود فروقات بين المسحات التى تم تثبيتها مباشرة والتى ثبتت بعد ساعتين او اربعة ساعات، من حيث شكل الخلايا ونمط الصبغة المستخدمة. بعد فحص خمسين من المسحات المثبتة مباشرة معظمها كانت جيدة جدا بنسبة 36(72%) متبوعة بجيدة وممتازة وفقيرة الصبغة فكانت 7(14%)، 3(6%)، 1(1%) على التوالى. 14(28%) من مجموع خمسين مسحة ثبتت بعد ساعتين كان نمط الخلايا جيد، 25(50%) كانت محتفظة جزئيا بشكل الخلايا والبقية 11(22%) كانت متغيرة كليا. بالنسبة للمسحات المثبتة بعد اربعة ساعات من مجموع خمسين 25(50%) كانت محتفظة جزئيا بشكل الخلايا، 20(40%) كانت متغيرة كليا و 5(10%) فقط كان نمط الخلايا جيد.

بمقارنة المسحات المثبتة مباشرة والمثبتة بعد ساعتين من حيث جودة الصبغة كانت كالاتى: ممتازة(3و0) جيدة جدا(36و1) جيدة(9و20) وفقيرة(2و20) على التوالى.

من هذه النتائج تبين ان الهيئة والنمط الظاهري للخلايا والصبغة المستخدمة تتاثر كليا بزمن التثبيت مما يدل على وجود علاقة بين تاخير التثبيت وتغيير شكل الخلايا ونمط الصبغة. خلصت الدراسة لعدم وجود علاقة بين التعقيم لحاويات البول فى المحافظة على شكل الخلايا ونمط الصبغة خاصة للمثبتة مباشرة.

توصى الدراسة باجراء دراسات اخرى لتاكيد هذه النتيجة وتطبيقها فى مجالات علم الخلايا الاخرى غير مختصة بامراض النساء

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List of Abbreviations

- *B.V:* Bacterial vaginosis.
- *DNA:* Deoxy Ribonucleic Acid.
- *HIV:* Human Immuno Deficiency Virus.
- *ImmunoCyt:* Immunocytochemistry.
- *N/C:* Nuclear/Cytoplasmic ratio.
- *RBCs:* Red Blood Cells.
- *STD:* Sexually Transmitted Diseases.
- *UK:* United Kingdom.
- *USA:* United States of America.