

ABSTRAK

Pengaruh Lama Fiksasi *Neutral Buffered Formalin* 10% Terhadap Kualitas Hasil Pewarnaan Hematoksilin Eosin Jaringan Mioma Uteri Di RSUD Wangaya

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Mioma uteri merupakan tumor jinak dari otot polos rahim yang diagnosis-nya dapat ditegakkan melalui pemeriksaan histopatologi dengan pewarnaan Hematoksilin Eosin (HE). Salah satu tahap penting dalam pembuatan preparat adalah proses fiksasi jaringan menggunakan *Neutral Buffered Formalin* (NBF) 10%, karena lama fiksasi dapat memengaruhi kualitas hasil pewarnaan jaringan. Penelitian ini bertujuan untuk mengetahui pengaruh lama fiksasi NBF 10% terhadap kualitas hasil pewarnaan Hematoksilin Eosin (HE) pada jaringan mioma uteri dengan waktu fiksasi 12 jam, 24 jam, dan 48 jam. Desain penelitian yang digunakan adalah eksperimental analitik. Penelitian dilakukan di RSUD Wangaya pada bulan Januari–Februari. Data dianalisis menggunakan uji normalitas *Shapiro-Wilk* dan diperoleh hasil bahwa data tidak berdistribusi normal sehingga dilanjutkan dengan uji *Kruskal-Wallis*. Hasil penelitian menunjukkan nilai *p-value* = 0,006 yang berarti terdapat perbedaan bermakna antar kelompok. Uji lanjutan (post hoc) *Mann-Whitney* menunjukkan terdapat perbedaan signifikan antara kelompok fiksasi 12 jam dengan 24 jam ($p = 0,047$) serta kelompok 12 jam dengan 48 jam ($p = 0,007$), sedangkan antara kelompok 24 jam dengan 48 jam tidak terdapat perbedaan signifikan. Hasil penelitian ini menunjukkan bahwa lama fiksasi NBF 10% berpengaruh terhadap kualitas hasil pewarnaan Hematoksilin Eosin (HE) pada jaringan mioma uteri, di mana fiksasi 24–48 jam memberikan kualitas pewarnaan yang lebih baik dibandingkan fiksasi 12 jam. Penelitian ini diharapkan dapat menjadi bahan pertimbangan dalam menentukan lama fiksasi jaringan pada pemeriksaan histopatologi rutin serta menjadi referensi bagi penelitian selanjutnya mengenai proses fiksasi jaringan dan kualitas pewarnaan Hematoksilin Eosin (HE).

Kata Kunci: Lama Fiksasi, NBF 10%, Pewarnaan HE.

ABSTRACT

The Effect of 10% Neutral Buffered Formalin Fixation Time on the Quality of Hematoxylin and Eosin (H&E) Staining in Uterine Fibroid Tissue at Wangaya Regional General Hospital

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Uterine fibroids are benign tumors originating from the smooth muscle of the uterus, and their diagnosis can be established through histopathological examination using Hematoxylin and Eosin (H&E) staining. One of the important stages in tissue preparation is the fixation process using 10% Neutral Buffered Formalin (NBF), as the duration of fixation may affect the quality of tissue staining. This study aimed to determine the effect of 10% NBF fixation duration on the quality of Hematoxylin and Eosin (H&E) staining in uterine fibroid tissue with fixation times of 12, 24, and 48 hours. This study employed an analytical experimental design and was conducted at Wangaya Regional General Hospital from January to February. Data were analyzed using the Shapiro–Wilk normality test, which showed that the data were not normally distributed; therefore, the Kruskal–Wallis test was subsequently performed. The results showed a p-value of 0.006, indicating a significant difference among the groups. Post hoc analysis using the Mann–Whitney test demonstrated significant differences between the 12-hour and 24-hour fixation groups ($p = 0.047$) and between the 12-hour and 48-hour fixation groups ($p = 0.007$), whereas no significant difference was found between the 24-hour and 48-hour fixation groups. The results indicate that the duration of 10% NBF fixation affects the quality of Hematoxylin and Eosin (H&E) staining in uterine fibroid tissue, in which fixation for 24–48 hours provides better staining quality than fixation for 12 hours. This study is expected to serve as a reference for determining tissue fixation duration in routine histopathological examinations and for further research regarding tissue fixation processes and the quality of Hematoxylin and Eosin (H&E) staining.

Keywords: *Fixation Time, 10% Neutral Buffered Formalin, H&E Staining.*