

## Proporsi kepositifan sitologi biopsi jarum halus transtorakal dengan panduan ultrasonografi toraks pada tumor paru dan tumor mediastinum di RSUP Persahabatan Jakarta = Cytological positive result in ultrasound-guided transtoracic fine-needle aspiration biopsy in lung and mediastinal tumors diagnostic at Persahabatan Hospital

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### Abstrak

Latar Belakang: Penegakkan diagnosis sedini dan setepat mungkin menjadi hal utama dalam penatalaksanaan kanker paru. Beberapa penelitian sebelumnya tentang biopsi transtorakal dengan panduan USG menunjukkan akurasi diagnosis yang cukup baik. USG dinilai sebagai modalitas radiologi yang mudah digunakan secara aman, bedside, real-time, mobile dan bebas pajanan radiasi. Saat ini di RSUP Persahabatan Jakarta belum terdapat penelitian tentang biopsi jarum halus transtorakal dengan panduan USG.

Metode Penelitian: Studi observasional dengan pendekatan potong lintang terhadap subjek dengan tumor paru atau tumor mediastinum yang dilakukan biopsi jarum halus transtorakal dengan panduan ultrasonografi toraks pada bulan April-September 2021. Pengambilan sampel dilakukan secara consecutive sampling. Peneliti melakukan observasi terhadap karakteristik lesi, karakteristik prosedur dan komplikasi. Diagnosis akhir berdasarkan hasil sitologi biopsi jarum halus transtorakal dengan panduan USG.

Hasil Penelitian: Dari 46 subjek, rerata usia subjek adalah 52 tahun dan didominasi jenis kelamin laki-laki (69,6%) dan jenis tumor terbanyak adalah tumor paru (80,4%). Proporsi kepositifan sitologi biopsi jarum halus transtorakal dengan panduan USG toraks adalah 78,3%. Karakteristik lesi pada subjek dengan hasil sitologi TTNA positif antara lain memiliki rerata diameter lesi  $9,61 \pm 2,27$  cm, lesi di anterosuperior paru (63,9%), memiliki gambaran ekogenitas hipoekoik heterogen (58,3%) dan memiliki kontak dengan pleura (77,8%). Karakteristik prosedur pada subjek dengan hasil sitologi TTNA positif antara lain dilakukan teknik aspirasi (77,8%), pengambilan TTNA sebanyak < 3 set (58,3%), rerata jumlah gelas objek yang terpakai adalah  $15 \pm 4$  dan median kedalaman insersi adalah 4 (2 – 6) cm. Komplikasi pasca tindakan terjadi pada dua subjek yaitu hemoptisis (4%).

Kesimpulan: Biopsi jarum halus transtorakal merupakan metode diagnostik yang invasif minimal dengan proporsi kepositifan yang tinggi (78,3%) dan angka komplikasi yang rendah (4%).

.....Background: Treatment of multidrug-resistant tuberculosis (MDR-TB) using second-line drugs is known to have more side effects. Recent studies have shown concern about bedaquiline and delamanid that can cause a prolonged QT interval. This condition is a known risk factor for Torsades de Pointes, a lethal cardiac arrhythmia. This study sought to observe the condition among such patients treated in the study location.

Methods: This study was a prospective cohort study of MDR-TB patients receiving bedaquiline in the outpatient clinic and inpatient ward of National Respiratory Referral Hospital Persahabatan, Jakarta, Indonesia between February 2020 to February 2021. Patients received 400 mg on week 0-2 (intensive phase) and followed by 200 mg 3 times per week (continuation phase) of bedaquiline. Sampling was carried out by

consecutive sampling and data on subjects who met the inclusion criteria were taken from medical records. Result: From a total of 71 subjects, all of them met the inclusion criteria. Prolonged QT interval was experienced in 18.3% patients. From eleven patients who experienced prolonged QT interval, two patients required hospitalization: one presented with nausea and gastric upset and one patient presented with dyspnea and palpitation. Prolonged QT interval occurred in initial phase and correlated with drug dosing. A mycobacterial culture conversion at month-6 was observed in those receiving multidrug regimens which include bedaquiline, quinolone, and clofazimine. There was a correlation between prolonged QT interval and hypocalcemia. Treatment success rate was 46.5% without prolonged QT. Other outcomes included 4.2% died, 26.8% loss-to-follow up, and 4.1% treatment failed.

Conclusion: The use of bedaquiline MDR-TB appeared to be effective and safe across different settings, although the certainty of evidence was assessed as very low. Hypokalemia was correlated with the outcomes of patients receiving bedaquiline, particularly in those experienced prolonged QT interval.