

## Valsalva maneuver to decrease pain intensity during arteriovenous fistula insertion in hemodialysis patients

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### Abstrak

AV fistula allows external vascular access for hemodialysis patients. Because hemodialysis patients experience puncture wounds and stabbing pain approximately 300 times a year, development of methods to decrease pain intensity are of great importance. Some techniques, such as the Valsalva maneuver, are known to reduce pain. This study aims to assess the effect of the Valsalva maneuver on decreasing the intensity of AV fistula pain in patients receiving hemodialysis. The quasi-experimental research of pre and post without control applying consecutive sampling to get as many as 63 respondents. Pain intensity was measured by using the Numerical Pain Rating Scale (NPRS). The Valsalva maneuver was performed during insertion of the AV fistula needle for 16–20 seconds. The results showed significant differences in pain intensity between before and after the intervention with the difference in mean that is 1.35 (SD = 0.54),  $t = 19.70$ ,  $p = 0.001$ . The Valsalva maneuver is effective in reducing the pain of AV fistula insertion because it stimulates the vagus nerve to induce an antinociceptive effect. Nurses are highly recommended to teach the Valsalva maneuver to patients undergoing routine hemodialysis.

.....Pemberian Teknik Manuver Valsalva terhadap Penurunan Intensitas Nyeri Penusukan Arteriovenous Fistula pada Pasien Hemodialisis. Arteriovenous (AV) fistula merupakan akses vaskuler eksternal pasien hemodialisis. Pasien hemodialisis mengalami luka tusuk dan nyeri akibat penusukan sekitar 300 kali setahun sehingga perlu diberi tindakan untuk membantu mengatasinya. Beberapa teknik diketahui dapat menurunkan nyeri seperti teknik Valsalva manuver. Penelitian ini bertujuan menilai efek teknik Valsalva manuver terhadap penurunan intensitas nyeri penusukan AV fistula pada pasien hemodialisis. Penelitian quasi eksperimen pre dan post tanpa kontrol menerapkan consecutive sampling untuk mendapatkan sebanyak 63 responden. Intensitas nyeri diukur menggunakan Numerical Pain Rating Scale (NPRS). Valsalva manuver dilakukan saat penusukan jarum AV fistula selama 16-20 detik. Hasil penelitian menunjukkan terdapat perbedaan signifikan antara sebelum dan sesudah intervensi dengan selisih mean yaitu 1,35 (SD= 0,54),  $t = 19,70$ ,  $p = 0,001$ . Valsalva manuver efektif menurunkan nyeri penusukan AV fistula karena menstimulasi saraf vagus dalam menginduksi efek antinociceptif. Teknik Valsalva manuver sangat direkomendasikan kepada perawat untuk mengajarkan teknik ini pada pasien yang menjalani hemodialisis rutin.