

CLINICAL INTEREST IN THE MEASUREMENT OF DIGITAL PRESURRE OF CHRONIC HEMODIALYSIS

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Abstract

The distal ischemia induced by hemodialysis access (HAIDI) can be classified as acute (the first postoperative day), subacute (≤ 1 month) or chronic (> 1 month), depending on the time of the creation of the 'access. The diagnosis is primarily clinical. However, further testing is beneficial in further evaluation of patients. The purpose of this study was to evaluate the use of finger pressure and oxygen saturation measurements for the diagnosis of chronic HAIDI.

Methods:

A total of 21 patients with chronic HAIDI (cases) and 33 asymptomatic hemodialysis patients (controls) were matched for age, sex and type of arteriovenous access. the etiology of end-stage renal failure in HAIDI group was represented by diabetes (28.6%), hypertension (38%), others (14%), while the causal nephropathy in the control group was 100% other than diabetes and hypertension basal digital pressure (BDP), digital pressure upon manual compression of the access, digital brachial index (DBI), digital pressure change with data compression (CDP), digital pressure on the contralateral side bilateral and oxygen saturation (Sat O₂) in all patients.

Results:

In the case group, the compression of the arteriovenous fistula (AVF) increased the mean BDP 58 ± 23 at 100 ± 26 mm Hg ($P < 0.01$), but has not reached the number average pressure non-AVF 140 ± 15 mm Hg ($P < 0.01$). In addition, O₂ Sat side of the AVF was significantly lower than the contralateral side ($92.5\% \pm 3\%$ vs $96.3\% \pm 2.4\%$, $P = 0.001$). Among the controls, manual compression AVF increased the mean BDP 110 ± 26 mm Hg to 123 ± 20 mm Hg ($P < 0.01$), which was still significantly lower than the contralateral side numerical average pressure of 141 ± 30 mm Hg ($P = 0.002$). In addition, O₂ Sat values on both sides were different ($96.7\% \pm 2.1\%$ against $97.1\% \pm 1.9\%$, $P = 0.01$). Comparing the cases and controls, the mean BDP (61 ± 26 mm Hg vs 114 ± 36 mm Hg, $P < 0.001$), DBI (0.43 ± 0.15 against 0,

Optimal discriminatory thresholds of 80 mm Hg for BDP, 0.7 DBI

40 mm Hg for CDP and 94% O₂ Sat were determined.

Conclusions:

The digital pressure and O₂ Sat measures are useful additional methods to help the clinical evaluation of hemodialysis patients with a hand of ischemia related to access. BDP < 80 mm Hg, DBI < 0.7 , CDP > 40 mm Hg and O₂ Sat $< 94\%$ are associated with chronic HAI

Biography:

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Publication of speakers:

1. S. EZZAKI: MO1040 KNOWLEDGE, ATTITUDES AND PERCEPTION OF ORGAN DONATION BY STUDENTS IN MEDICINE Year : Jan 2021
2. S. EZZAKI: MO344 INCIDENCE AND RISK FACTORS FOR ACUTE POSTOPERATIVE RENAL FAILURE year: 2021

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