

Perbandingan jahitan transsternal dan peristernal pada fiksasi figure of eight untuk aproksimasi sternum = Figure of eight for sternal fixation comparison of trans sternal and peristernal method

Ahmat Umar, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20455527&lokasi=lokal>

Abstrak

ABSTRAK

Latar belakang: Beberapa komplikasi sulit yang timbul setelah tindakan sternotomi mediana yang menjadi penyebab utama mortalitas dan morbiditas pasien. Hal ini dapat dicegah dengan aproksimasi sternum yang stabil, Berbagai macam teknik jahitan fiksasi untuk aproksimasi sternum menggunakan wire. Peneliitian ini membandingkan biomekanik teknik jahitan figure of eight trans-sternal dan peristernal. Metode: Penelitian eksperimental pada sternum kambing sebanyak 36 sampel, dilakukan sternotomi mediana, kemudian dilakukan fiksasi sternum menggunakan wire, 18 sampel dilakukan fiksasi jahitan figure of eight peristernal dan 18 sampel trans-sternal. Dinilai dengan uji komparasi tiga dimensi: lateral distraction, transversal shear dan longitudinal shear dengan beban 125N, 150N, 200N, 250N, 300N, 400N. pergeseran diukur dalam mm setiap tingkat pembebanan. Dilakukan analisis statistik dengan uji independent sample t-test. Hasil: Pada uji lateral distraction dan longitudinal shear didapatkan perbedaan bermakna pada pemberian beban ringan 125N, 150N dan 200N, pada beban 300N dan 400N tidak ada perbedaan bermakna. Uji transversal shear tidak ada perbedaan bermakna pada kedua teknik jahitan. Pada hasil uji tarik kedua teknik jahitan mengalami pergeseran lebih dari 2mm pada pembebanan 250 N. Kesimpulan: Stabilitas sternum pada teknik jahitan figure of eight peristernal sama dibanding jahitan figure of eight trans-sternal.

<hr />

ABSTRACT

Backgrounds There are troublesome complications following median sternotomy which are lead to major causes of morbidity and mortality of patients. This can be prevented by stable sternal approximation, Various suturing fixation method for sternal approximation using wire. To compare the biomechanics of the figure of eight trans sternal and the peristernal suturing method. Methods Experimental study on goat sternum 36 samples, performed sternotomi mediana, then performed sternum fixation using wire, 18 samples performed suturing fixation of figure of eight peristernal and 18 sample trans sternal. Assessed by a three dimensional comparative test lateral distraction, transversal shear and longitanium shear with loads of 125N, 150N, 200N, 250N, 300N, 400N. Shifts are measured in mm at each loading level. Statistical analysis was performed using independent sample t test. Results In lateral distraction and longitudinal shear tests, there were significant differences in the loading of light loads of 125N, 150N and 200N. The transverse shear test no significant difference in the two suturing techniques, In the bending test results both suturing method experience a shift of more than 2mm at 250 N loading. No other significant differences in clinical outcomes. Conclusions The sternal stability of the peristernal figure of eight method is the same as that of the trans sternal figure of eight.