

BLOK PARAVERTEBRAL

1

Tujuan

- Memahami dasar anatomi & fisiologi blok paravertebral
- Memahami indikasi blok paravertebral
- Memahami prinsip dasar teknik blok paravertebral
- Memahami peralatan dan obat-obatan blok paravertebral
- Mengetahui efek samping blok paravertebral, pencegahan dan cara mengatasinya

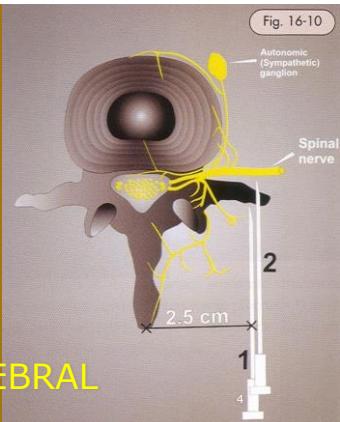
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BLOK PARAVERTEBRAL

THORAKAL
THORAKOLUMBAL
PLEKSUS LUMBAL

3

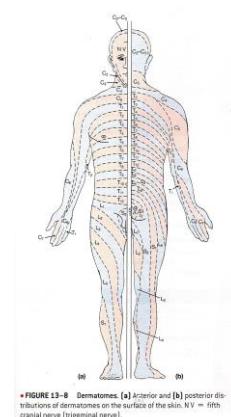
BLOK PARAVERTEBRAL



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•FIGURE 13-8 Dermatomes: (a) Anterior and (b) posterior distributions of dermatomes on the surface of the skin. NV = 6th cranial nerve [trigeminal nerve].

BLOK PARAVERTEBRAL THORAKAL

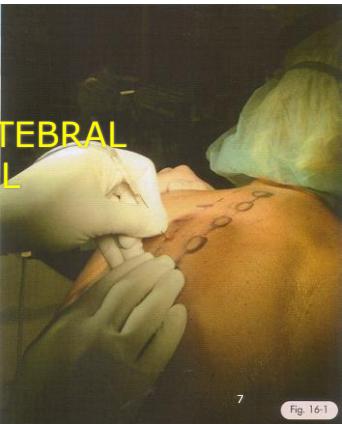


Fig. 16-1

Table 2. Reported Indications for Thoracic Paravertebral Block

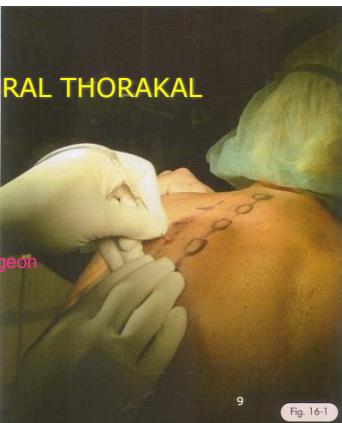
- | |
|---|
| Postoperative analgesia |
| Thoracic surgery |
| Breast surgery |
| Cholecystectomy |
| Renal and ureteric surgery |
| Herniorrhaphy |
| Appendectomy |
| Video-assisted thoracoscopic surgery |
| Minimally invasive cardiac surgery |
| Surgical anesthesia |
| Breast surgery |
| Herniorrhaphy |
| Chest wound exploration in a single lung transplant recipient |
| Acute postherpetic neuralgia |
| Chronic pain management: benign and malignant neuralgia |
| Miscellaneous |
| Fractured ribs |
| Therapeutic control of hyperhidrosis |
| Liver capsule pain after blunt abdominal trauma |

Fig. 16-1

BLOK PARAVERTEBRAL THORAKAL

TECHNIQUES

- Landmark
- Nerve Stimulation
- USG Guided
- Direct Vision by Surgeon



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Fig. 16-1



Landmarks

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Insersi jarum: 2,5 cm lateral midline
Target: inserasi jarum 1cm melewati
proc.transversus
Obat AL: 3-5cc/segmen

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BLOK PARAVERTEBRAL THORAKAL

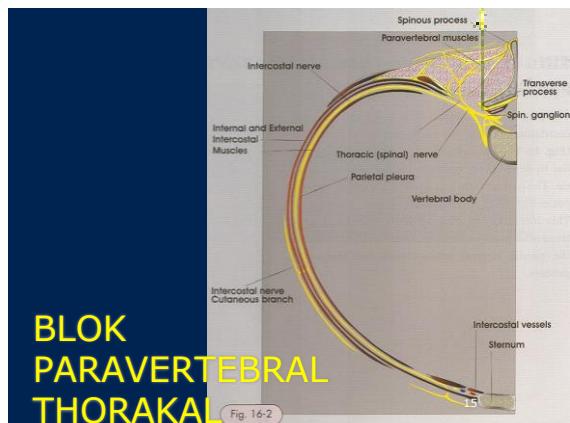
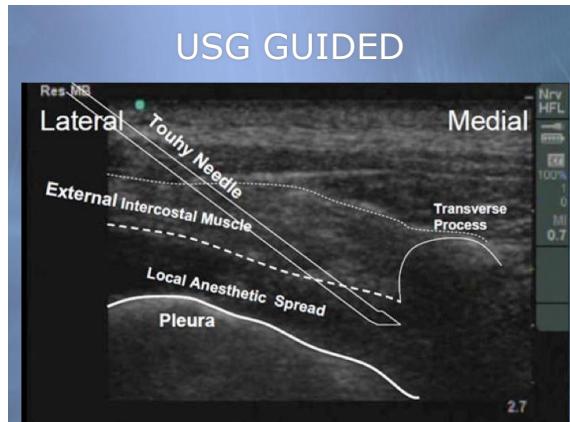
- Injeksi obat AL sekitar saraf Th yg baru keluar dari foramen intervertebral
- Blokade ipsilateral somatik & simpatik
- Hemodinamik stabil
- Tanpa nerve stimulator

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Nerve Stimulator

- 2 Hz, pulse width 0.3ms, current of 2mA
- Intercostal or abdominal muscle contraction
- More useful in lower thoracic and lumbar

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BLOK PARAVERTEBRAL THORAKOLUMBAL

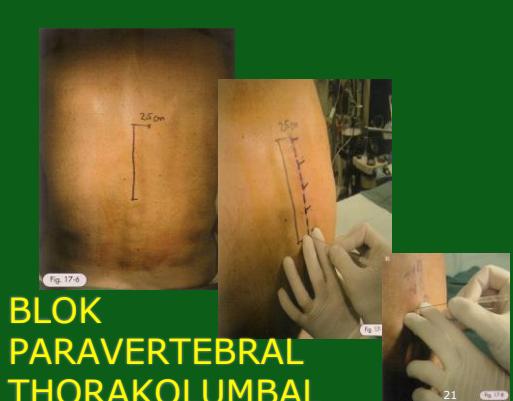
- Indikasi : op.hernia inguinalis,
op.dind.lateral abdomen, analgetik
post op.panggul
- Landmark: proc.spinal T9-L5 (setinggi
dermatom yg ingin diblok),
proc.transversus
- Insersi jarum: 2,5 cm lateral midline
- Target: insersi jarum 1 cm melewati
proc.transversus

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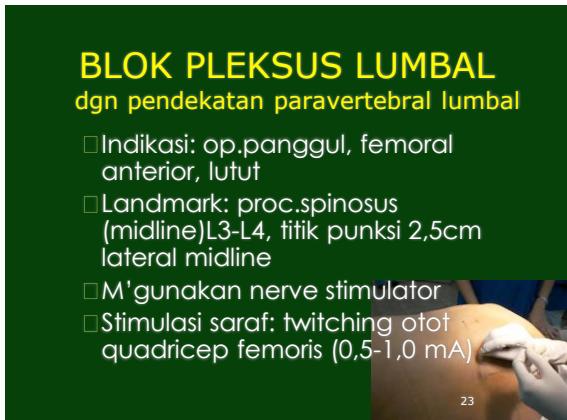
BLOK PARAVERTEBRAL THORAKOLUMBAL

- Obat AL: 5cc/segmen
- Prinsip teknik spt blok paravert.thorakal
- Blok yg dihasilkan menyerupai
unilateral epidural
- Hemodinamik stabil
- Utk ambulatory: hindari blok L2
(n.femoral)
- Tanpa nerve stimulator

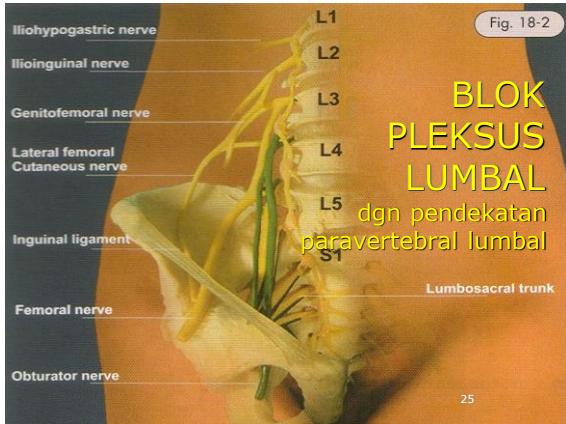
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RESPONS THD STIMULASI

- Twitching otot paraspinal kurang dalam
- Terkena tulang tarik jarumnya, arahkan 5° kranial atau kaudal
- Twitching otot hamstring terkena pleksus sciatic = terlalu kaudal tarik jarumnya, insersi 3-5 cm lebih kranial

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RESPONS THD STIMULASI

- Fleksi paha terkena otot psoas = terlalu dalam segera tarik jarumnya & ulangi insersi dari awal
- Jarum masuk 10cm tp tdk ada twitching kaji ulang landmark & ulangi insersi

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OBAT ANALGETIK LOKAL

Obat	Onset (mnt)	Durasi anestesia (jam)	Durasi analgesia (jam)
2% lidokain (HCO3+epinefrin)	10-15	2-3	3-4
0,5% Ropivakain	15-25	3-5	8-12
0,75% Ropivakain	10-15	4-6	12-18
0,5% Bupivakain (+epinefrin)	15-25	4-6	12-18
0,5% Levobupivakain (+epinefrin)	15-25	4-6	12-18 31

PENDEKATAN DENGAN USG

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KOMPLIKASI & PENCEGAHAN

- Infeksi lakukan scr a&anti-septik
- Hematoma cegah insersi jarum berulang kali pd psn dgn th/ antikoagulan
- Cedera saraf segera hentikan jika psn nyeri hebat saat obat AL disuntikkan

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KOMPLIKASI & PENCEGAHAN

- Total spinal anestesia → jgn insersi jarum ke medial, aspirasi sblm obat disuntikkan
- Pada ambulatory blok thorakolumbal: Parese quadrisept femoris → ingat bhw n.femoralis = L2-L4
- Nyeri otot paravertebral → gunakan analgetik infiltrasi & jarum yg kecil

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KOMPLIKASI & PENCEGAHAN

- Hemodinamik →
 - Hipotensi amat jarang pada thorakal dan thorakolumbal
 - Pada pleksus lumbal jika terjadi penyebaran AL ke epidural, dapat mengakibatkan hipotensi (15%)

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KOMPLIKASI & PENCEGAHAN

- Toksisitas AL → jarang
 - absorpsi obat di paravertebra sangat cepat !
 - tambahkan epinefrin utk m'perlambat absorpsi sistemik
 - pd pleksus lumbal pertimbangkan ulang perlukah vol.besar & long acting AL pd psn dgn risiko tinggi

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Paravertebral (duduk)
pasien dgn sedasi ringan

video



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video
Paravertebral
pasien dgn kombinasi GA-LMA



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video
Paravertebral utk eksisi
biopsi tu mammae



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