

내분비 질환에서의 최소침습수술

Minimally Invasive Surgery in Endocrine Surgical Diseases

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Abstract

The concept of minimally invasive endocrine surgery is the newest and most interesting field of surgery. Endocrine surgery is well suited to minimally invasive technique because the nature of most endocrine operations involves a total or partial resection of a gland and reconstructive surgery is rarely necessary. The minimally invasive thyroid procedure can be classified into endoscopic technique with or without constant gas insufflation, video - assisted technique performed under direct and endoscopic vision, and minimally invasive open technique. The endoscopic technique can be subclassified into a neck approach, anterior chest approach, breast approach, and axillary approach. Each of these techniques has its own advantages in terms of cosmetic results, invasiveness, safety, and ease of use. With experience and more advanced devices, minimally invasive thyroid surgery can replace the traditional procedure for most patients. The advances in diseased parathyroid gland and removal make surgical removal for primary hyperparathyroidism simpler and faster. Various types of minimally invasive parathyroid surgery (endoscopic technique, video - assisted technique, radio - guidance technique, and focused parathyroidectomy) are now performed and have replaced traditional exploration for most patients. The adrenal surgery is well suited for laparoscopic removal due to their relatively small size and the low incidence of malignancy. Since its first description in 1992 by Gagner and associates, the laparoscopic adrenalectomy has become the gold standard for the treatment of most benign adrenal tumors and can give more benefits to the patients with advanced surgical skills and laparoscopic instruments.

1990

가

Keywords : Minimally invasive endocrine surgery; Endoscopic

: ;

(4)

(2~2.5 cm)

가

가

가

가

CO₂ 가

가

가

가

1997 Huscher (1)

가

(2, 3)

(2.0~4.5 cm)

가

가

가

가

,
 (learning curve) 가
 , , , 2001 12 2003 6 92
 ,
 ,
 ,
 3 cm, 0.5 cm
 CO₂ 가
 10 mmHg CO₂ 가
 가 10~15
 (hypercarbia, metabolic acidosis, subqutaneous emphysema) 가
 (5) 6~8 mmHg
 가
 가
 CO₂ 가 (strap meuscle)
 가
 (6)
 가
 가
 (7) 가
 가 (8)
 가 가
 (9) 가
 Harmonic scarpel
 50
 5.0 cm
 가

1.5 cm

가

가

1990 sestamibi scan

(intraoperative quick PTH
assay) (10, 11),

1~2

3

가

59%가

가

(12).

(radio - guidance parathyroidectomy),

가

(minimally invasive

focused parathyroidectomy)가

가

1970

가

가

immunoradiometric assay(double - antibody

IRMA) intact PTH

(13~15).

가

가

sestamibi scan

가

(16)

tamibi scan
Clark (18) ses
가 95%
가 (2.0 cm)
focused parathyroidectomy 가

sestamibi scan
가

가
,

가
가

가

, ,

(21 ~ 23).

가
가

(learning curve) 가

가

가

가

, toneal approach) 가

(transperi-

(retroperitoneal approach)(24)

가

가

trocar

5 ~ 12 mm 2 ~ 3 m

가

(25). ☺

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