

Central Neck Dissection in Micropapillary Thyroid Carcinoma(MPC)

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Micropapillary Carcinoma(MPC)

1. Definition

Equal or less than 1.0cm at the greatest dimension

WHO classification for thyroid tumor (1989)

Incidence

- Increasing due to high-resolution thyroid US and US-guided FNA
- 23–30% of thyroid papillary carcinoma
- 35.6% at autopsy study

Not palpable, asymptomatic

2. Treatment

Initial Surgery

- Lobectomy
- Bilateral lobectomy
- Total thyroidectomy

Still on debate!!!

Neck management : Preventive central neck dissection-
Controversy

RI : treatment outcome not definite

Occult Papillary Thyroid Carcinomas

(2003 Ito et al.)

With informed consent

162 patients close observation

Follow-up time (18–113 month)

70% no size increase

Only 2 developed LN metastasis

LN Metastasis of MPC

**Marked geographic difference(Bramley et al.
Harach et al.)**

35.6% in Finland

11.3–28.4% in Japan

13% in Hong Kong

1.5% in Greece

1% in Brazil

1998 Baudin et al.(1962~1995)

Gustave-Roussy Institute

281 MPC (189 incidental, 89 not)

All total thyroidectomy done post op RI

Prognostic factor : multifocality

Involvement of neck LN related to multifocality

Multifocal MPC : Total thyroidectomy c CND + RI

2003 Chow(1960~1999)

MPC : LN mets 24.6% (n=203)

PTC : LN mets 33.2% (n=681)

All total thyroidectomy had postop RI

LN mets / Multifocality / RI

High recurrence

Both locoregional / LN

LN surgery not related

2004 Ito et al.(1993~2002)

751 MPC → 619 undergone surgery

CND was performed in all patients

301 patients showed central and/or lateral pathologic LN

Under 7mm revealed lower rate of pathologic neck LN
(both Central/Lateral)

Lateral LN involvement → high recur

2008 Hay et al. (1945~2004)

900 MPC with diverse treatment modality

Multifocal (23%), Bilateral (12%), Node positive (30%)

→ recurrence risk increased

Prior reports

more extensive surgery → lower recurrence

MPC strategy at Mayo clinic

All resection of primary tumor
Including contralateral lobe and central neck

2008 Noguchi et al.(1966~1995)

2070 MPC
Radical surgery done
363 patients showed Node metastasis
The number of LN inversely related to recurrence-free survival

2009 Mercante et al.(1978~2003)

455 MPC
All total thyroidectomy done post op RI
112 patients showed Node metastasis
Extrathyroidal extension, Multifocality, LN metastasis was related to recurrence

Summary

LN metastasis rate 1~43%
LN metastasis vs recurrence
Related > Not related
Two different idea
extensive surgery needed
Thyroidectomy + RI is enough
Limitations
Diverse treatment modality (eg : RI)
Not all patients undergone CND

Incidental vs Non-incidental MPC

2003 Wada et al.(1988~1998)

235 MPC Prophylactic LN dissection
155 MPC incidental found (no CND)
RI not mentioned
Recurrence
MPC s CND (f/u 12-132m) : 1/155 (0.65%)
MPC c CND (f/u 14-144m) : 1/235 (0.43%)
Preventive CND not needed !!!
And palpable LN --> high risk of recur

2004 Pellegriti et al.(1975~2001)

148 MPC clinical (Thyroidectomy + CND)
151 MPC incidental found (no CND)
Post operative LN groups done RI
Between 2 groups

Multifocality (incidental < clinical)

LN metastasis (incidental < clinical)

Non incidental cancer had more persisting/relapsing disease

2009 Pisanu et al.(1998~2007)

76 non-incidental/73 incidental
Non-incidental MPC and few incidental MPC
More aggressive behavior
Thyroid capsular invasion
LN metastasis
Tendency to recur

Worldwide Trend for MPC

Japan :

In the absence of palpable LN, perform routine ipsilateral neck node dissection

In North America and Europe :

only those patients with palpable LN undergo a lymph node dissection

Why CND Preferred?

- 1) Bilateral CND is recommended by ATA
- 2) No additional incision
- 3) Revision surgery → higher complication rate

Why CND not Preferred?

- 1) Radioactive Iodine Treatment
- 2) Risk of Hypoparathyroidism, RLN injury
- 3) Cost of General Anesthesia

Central Neck Dissection in MPC

Still on Debate !!!

Not too much, Not too little

Thyroidectomy alone
Enough? but not in all cases

Thyroidectomy + RI
Thyroidectomy + ipsiCND
Thyroidectomy + bilatCND
→ *Case by case*
→ *Surgeons choice*

MPC in DKUHENT

2004–2008(88 MPC)

• F : M = 77 : 11

• ECS : 30.7%

• LN mets : 13 %

• Multifocal : 29.5 %

2 cases recurred : 1 LN (+), 1 Multifocal