

삼출성 중이염 환자에서 Politzer 이관통기후 중이압력의 변화

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Changes of Middle Ear Pressure after Politzer Inflation
in Otitis Media with Effusion

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- ABSTRACT -

Background and Objectives : Otitis media with effusion is one of the most common diseases of young children. Impedance audiometry is an accurate method of detecting it. Middle ear inflation such as Politzerization had been used as a conservative method to treat the otitis media with effusion. Recently, the middle ear pressure regulation through gas exchange between the middle ear and blood is known. Several investigators suggest that middle ear inflation may not be useful to treat the otitis media with effusion because middle ear inflation initiates a process of gas exchange and causes an immediate increase in middle ear pressure and follows by rapid decrease to the level before inflation. So, We studied to know changes of middle ear pressure and therapeutic benefits after Politzer inflation. **Materials and Methods** : We studied to determine the effects of Politzer inflation in 44 ears with otitis media with effusion. The tympanometric peak pressure was used as indirect method to measure the middle ear pressure. The measurements were performed before, immediately, 10 min, 30 min, 1hr after Politzer inflation and every 3 days. **Results** : The middle ear pressure induced by Politzer inflation was gradually declined to 93.5% within 1hr. 11 ears were more negative pressure at 1hr than pre-inflation level. That of 6 ears with atelectasis was rapidly decreased to 98.2% within 10 min after inflation. The middle ear pressure of 32 ears with good result was shifted toward positive pressure zone after inflation every 3 days and it was restored to normal range. But that of 6 ears with poor result was fluctuated with increased or decreased change and was not improved to it. **Conclusion** : Politzer inflation has several benefits to treat the otitis media with effusion such as restoration of negative middle ear pressure and promotion of drainage of fluid. (**J Clinical Otolaryngol 2000;11:41-45**)

KEY WORDS : Politzer inflation · Tympanometric peak pressure · Otitis media with effusion.

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Bluestone 12)

Politzer

결 과

- 400 + 110 daPa
 - 184 ± 15.6 (Mean ± SE) daPa
 - 130 + 200 daPa 56 ± 9.6 daPa
 10 - 45 ± 8.4 daPa, 30 - 128 ± 9.1 daPa, 1 - 168.5 ± 11.4 daPa

연구대상 및 방법

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(Tymp 87, Danplex Co.)

tympanometric peak pressure

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가
 10 42.1%, 30 76.6%, 1 93.5%

11 Atele-
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- 400 - 215 daPa 가

10 98.2%

(Fig. 1).

44 32

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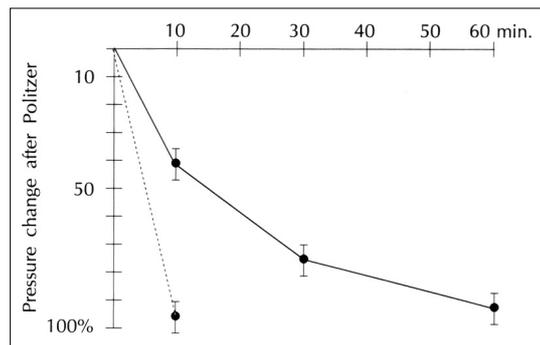


Fig. 1. Changes of middle ear pressure induced by Politzer inflation. The elevated pressure was declined to 42.1%, 76.6%, 93.5% at 10, 30, 60 min. That of 6 ears with Atelectasis was rapidly decreased to 98.2% within 10min. Dotted lines represents the pressure change of Atelectasis ear. The vertical bar represents the standard error.

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Politzer

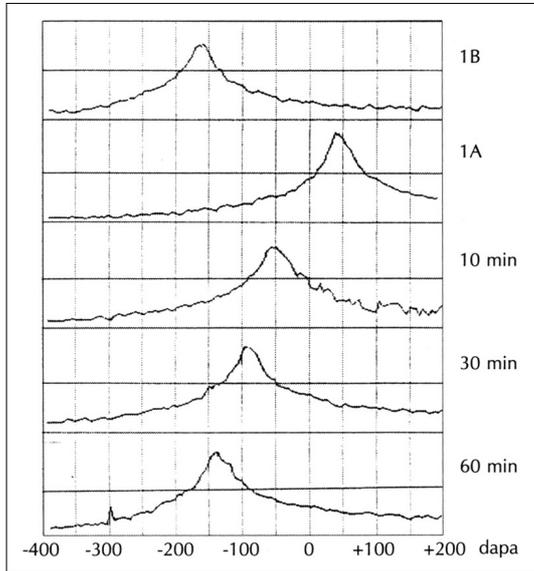


Fig. 2. Tympanometric peak pressure performed immediately before, immediately after, 10 min, 30 min, 1 hr after Politzer inflation in a case with good result. 1B ; immediately before, 1A ; immediately after.

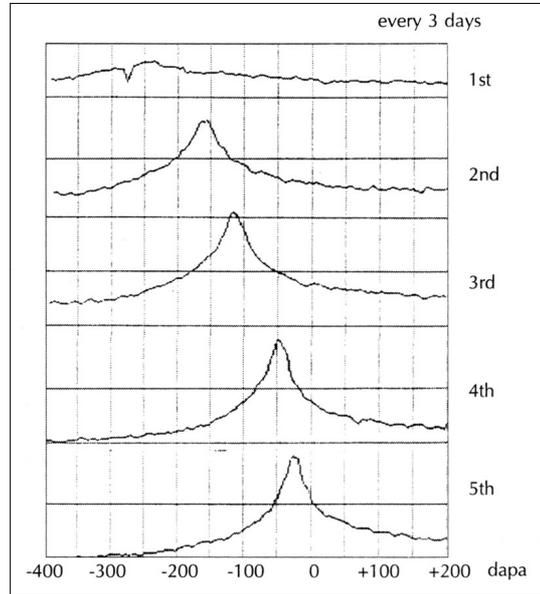


Fig. 3. Tympanometric peak pressure performed every 3 days. It is gradually shifted toward the positive pressure zone in a case with good result.

Table 1. Values of middle ear pressure of 6 ears with poor result measured every 3 days

Case	1st	3rd	5th	7th	9th	11th	13th	15th every 3 days
No.1	- 125	- 180	- 220	- 305	- 315	- 270	- 300	- 310
No.2	- 260	- 380	- 310	- 210	- 140	- 165	- 270	- 315
No.3	- 310	- 305	- 360	- 395	- 300	- 390	- 230	- 245
No.4	- 395	- 230	- 400	- 320	- 260	- 140	- 200	- 245
No.5	- 255	- 270	- 225	- 315	- 300	- 260	- 240	- 255
No.6	- 310	- 225	- 305	- 360	- 395	- 300	- 390	- 230

Pressures are given in daPa.

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(Figs. 2 and 3).

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(Table 1).

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79%,

21%,

1)4)5)7-9) Elnert¹⁰⁾

0.03%

Doyle⁶⁾

Bluestone¹²⁾

가

13)14)

Cantekin,¹⁾ Doyle⁵⁾

2)4)5)

65 mmHg,

37 41 mmHg,

52 mmHg 58 mmHg

60 70 mmHg¹⁾⁷⁾

Politzer

Valsalva

3

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16)

tympanometric peak pressure

Doyle⁴⁾ -200 mmH₂O

가

가

0 10 42.1%, 30 76.6%, 1

93.5% 1

가

Shinkawa³⁾

가

Atelectasis가 6 10

98.2% 가

5)6)9)

Magnuson¹¹⁾

가

가

1

가 11

가

Atele-

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3

ctasis

6

2 3

Doyle

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6)

otovent, Toynbee

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