

PMC XML 소개:

XML 작업과정에서 발견한 편집 에러사항을 중심으로

숙명여대 문헌정보학과

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학습 목표: PMC XML에 필요한 기본 태그들을 알고, PMC XML을 작성하는 과정에서 발견된 예를 토대로 학술지 편집 에러를 줄이는 방법을 생각해본다.

구체 목표:

- 1) PMC XML의 특징을 설명할 수 있어야 한다.
- 2) PMC XML의 기본 tag들을 알아야 한다.
- 3) PMC XML 작업을 통해서 발견된 학술지 자체 편집 에러의 유형을 살펴보고, 학술지 편집에 참고하도록 한다.

1. PubMed Central XML

1.1. PubMed Central

- 학술지 논문의 full-text를 자유롭게 접근할 수 있도록 구현하는 것
- References에서 PubMed 레코드로 linking 구현
- PubMed Central XML Tagging Guidelines
<http://www.pubmedcentral.nih.gov/pmcdoc/tagging-guidelines/article/style.html>
- Journal Publishing Tag Set Tag Library: version 2.3
<http://dtd.nlm.nih.gov/publishing/tag-library/2.3/index.html>
 - > Document Hierarchy Diagrams
 - > Index by Elements
 - > Index by Tags
 - > Full Article Samples

1.2. PMC XML 작업 환경 만들기

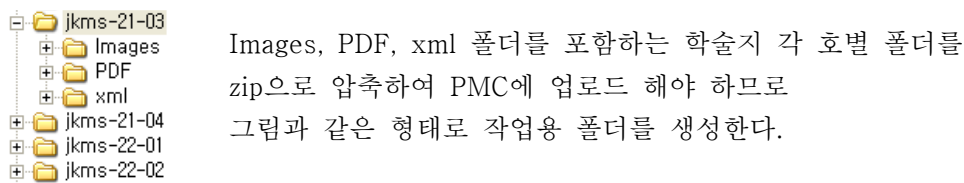
- Journal Publishing Tag Set (<http://dtd.nlm.nih.gov/publishing>) 접속

- Journal Publishing DTD Version2.3: journal-publishing-dtd-2.3.zip
다운로드

<http://dtd.nlm.nih.gov/publishing/2.3/index.html>

- Preview Stylesheet: ViewNLM-v2.3.zip 다운로드
- editpad.exe
- Reference Converter: DrXML 9.4 ver.

1.2.1. PMC 폴더 생성

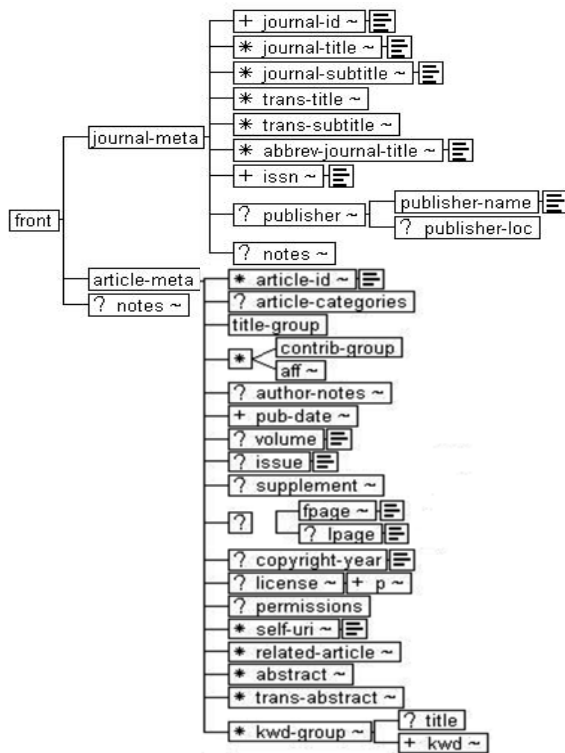


- xml & PDF 파일명 부여방법: Jour-vol-pg.ext
e.g., jkms 21권 5페이지의 xml 문서 파일명 → jkms-21-5.xml
jkms 21권 5페이지의 pdf 문서 파일명 → jkms-21-5.pdf
- 그래픽 & 부록 파일명 부여방법: Jour-vol-pg-typ000.ext
 - g: figure graphic + alphanumeric identifier
 - i: inline graphic + alphanumeric identifier
 - s: supplementary data file + alphanumeric identifier
 - e: equation + alphanumeric identifier
 - a: appendix + alphanumeric identifier
 e.g., jkms 21권 5페이지의 Fig. 2의 이미지 파일명 → jkms-21-5-g002.tif
 jkms 21권 5페이지의 Table. 1의 이미지 파일명 → jkms-21-5-i001.tif

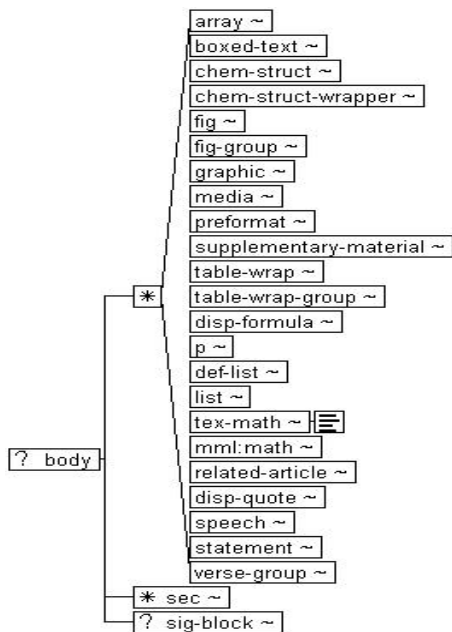
1.2.2. PMC XML 파일 구조

Element	Required
? Element	Optional. May occur zero or one time.
+ Element	Required, repeatable. May occur one or more times.
* Element	Optional, repeatable. May occur zero or more times.

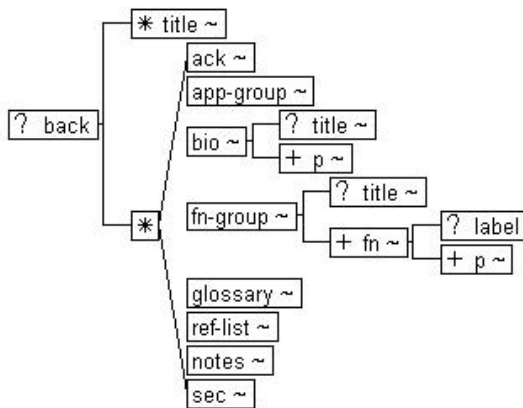
a. front



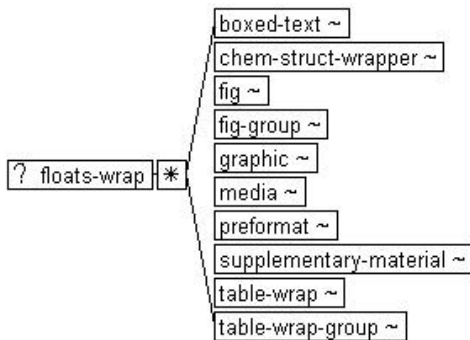
b. body



c. back



d. floats-wrap



1.2.3. PMC XML 에러 체크 순서

PMC Style Checker

http://www.pubmedcentral.nih.gov/utis/style_checker/stylechecker.cgi

PMC XML Validator

<http://www.pubmedcentral.nih.gov/utis/validate/xmlcheck.cgi>

PMC Article Previewer <http://www.pubmedcentral.nih.gov/utis/pv/>

**** PMC XML 가이드라인은 KAMJE website (<http://kamje.or.kr>) > KoreaMed > PubMed central XML 만들기 > “PMC xml 작성가이드”를 참고하시기 바랍니다.**

1.3. PMC XML Blank file

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE article PUBLIC "-//NLM/DTD Journal Publishing DTD v2.3 20070202//EN"
"journalpublishing.dtd">
<?xml-stylesheet type="text/xsl" href="ViewNLM-v2.3.xsl"?>
<article xml:lang="EN" article-type="research-article">
```

```
<front>
```

```
<journal-meta>
<journal-id journal-id-type="nlm-ta"></journal-id>
<journal-id journal-id-type="publisher-id"></journal-id>
<journal-title></journal-title>
<issn pub-type="ppub"></issn>
<issn pub-type="epub"></issn>
<publisher>
<publisher-name></publisher-name>
</publisher>
</journal-meta>
```

```
<article-meta>
<article-id pub-id-type="doi"></article-id>
<article-id pub-id-type="pmid"></article-id>
<article-categories>
<subj-group>
<subject></subject>
</subj-group>
</article-categories>
<title-group>
<article-title></article-title>
</title-group>
```

```
<contrib-group>
```

```
<contrib contrib-type="author">
<name>
<surname></surname>
<given-names></given-names>
</name>
<degrees></degrees>
<xref ref-type="aff" rid="A1"></xref>
</contrib>
```

```
</contrib-group>
```

```
<aff id="A1"></aff>
<aff id="A2"></aff>
```

```
<author-notes>
<corresp>
</corresp>
</author-notes>
```

```
<pub-date pub-type="ppub">
<month></month>
<year></year>
</pub-date>
<pub-date pub-type="epub">
<day></day>
<month></month>
<year></year>
</pub-date>
<volume></volume>
<issue></issue>
<fpage></fpage>
<lpage></lpage>
<history>
<date date-type="received">
<day></day>
<month></month>
```

```
<year></year>
</date>
<date date-type="accepted">
<day></day>
<month></month>
<year></year>
</date>
</history>
<permissions>
<copyright-statement></copyright-statement>
</permissions>
```

```
<abstract>
<sec>
<title></title>
<p></p>
</sec>
</abstract>
<kwd-group>
<kwd></kwd>
</kwd-group>
```

```
</article-meta>
</front>
```

```
<body>
```

```
<sec sec-type="intro">
<title></title>
<p></p>
<sec>
```

```
<sec sec-type="methods">
<title></title>
<sec>
<title></title>
<p></p>
</sec>
</sec>
```

```
<sec sec-type="results">
<title></title>
<sec>
<title></title>
<p></p>
</sec>
</sec>
```

```
<sec sec-type="discussion">
<title></title>
<p></p>
</sec>
```

```
</body>
```

```
<back>
```

```
<ack>
<title></title>
<p></p>
</ack>
```

```
<ref-list>
  <ref id="B1">
    <label>1</label>
    <nlm-citation citation-type="journal">
      <person-group person-group-type="author">
        <name>
          <surname></surname>
          <given-names></given-names>
        </name>
      </person-group>
      <article-title></article-title>
      <source></source>
      <year></year>
      <volume></volume>
      <fpage></fpage>
      <lpage></lpage>
    </nlm-citation>
  </ref>
```

```
<ref id="B2">
  <label>2</label>
  <nlm-citation citation-type="journal">
    <collab></collab>
    <article-title></article-title>
    <source></source>
    <year></year>
    <volume></volume>
    <fpage></fpage>
    <lpage></lpage>
  </nlm-citation>
</ref>
```

```
<ref id="B3">
  <label>3</label>
  <nlm-citation citation-type="book">
    <person-group person-group-type="author">
      <name>
        <surname></surname>
        <given-names></given-names>
      </name>
    </person-group>
    <article-title></article-title>
    <source></source>
    <year></year>
    <edition></edition>
    <publisher-loc></publisher-loc>
    <publisher-name></publisher-name>
  </nlm-citation>
</ref>
</ref-list>
```

```
<fn-group>
  <fn fn-type="supported-by">
    <p></p>
  </fn>
</fn-group>
```

```
</back>
```

```

<floats-wrap>

<fig position="float" id="F1">
<label>Fig. 1</label>
<caption>
  <p></p>
</caption>
<graphic xmlns:xlink="http://www.w3.org/1999/xlink" xlink:href="kjr-vol-fpage-g001"
alt-version="no"></graphic>
</fig>

<table-wrap position="float" id="T1">
<label>Table 1</label>
<caption>
  <p></p>
</caption>
<graphic xmlns:xlink="http://www.w3.org/1999/xlink" xlink:href="kjr-vol-fpage-i001.tif"
alt-version="no"></graphic>
<table-wrap-foot>
<fn>
  <p></p>
</fn>
</table-wrap-foot>
</table-wrap>

</floats-wrap>

</article>

```

2. 학술지에 나타난 편집 에러 (혹은 저자 에러)

2.1. 본문 에러

- Spelling error (kjp-45-95)

vein, and are carried to the liver (Leuttermoser, 1938). Larval maturation is swift, and female worms bearing ova may be seen 18-21 days after the ingestion of embryonated eggs by the host (Luttermoser, 1938; Wright 1961). Normal egg production increases rapidly from day 20 post-infection (PI) to its peak at day 40 PI, with no further egg production occurring after about day 70 PI (Lämmler et al., 1974).

- 저자 affiliation에 label 표기가 잘못된 경우

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Department of Ophthalmology, Seoul National University Bundang Hospital³, Seoul, Korea

· 문장 끝에 마침표 없음 (kjo-21-131)

Purpose: To compare forward shift of posterior corneal surface and higher-order aberration (HOA) changes after LASIK, LASEK, and wavefront-guided LASEK surgery in moderate myopia

Methods: One hundred eighty four eyes undergoing LASIK, LASEK and wavefront-guided LASEK with VISX STAR S4 were included in this study. The posterior corneal elevation was measured with Orbscan before, 2 and 4 months after surgery. Changes of the elevation were assessed using the difference map generated from preoperative and postoperative elevation maps. The values of higher-order aberrations were evaluated preoperatively and 2 months postoperatively with Wavefront aberrometer.

· Apostrophe 에러 (kjo-21-155)

To determine the risk factors for consecutive ET, the patient's age, refractive error, type of surgery, deviation angle, and lateral incomitancy were analyzed for each group. Lateral incomitancy was defined as a condition in which the angle of exotropia for lateral gaze was 20% or less than the angle for primary gaze.

Pearson's chi-square test was used for statistical analysis.

· 문장이 끝나지 않았는데, 문단을 바꾼 경우 (kjo-21-155)

Generally, the age of onset for solitary fibrofolliculoma is the sixth decade, in contrast to the much earlier onset (in the third decade) of the multiple hereditary form.³ However, reports of solitary fibrofolliculoma in Korea reveal that the lesion has arisen

in patients between 1 and 36 years of age, indicating that the lesion can arise in patients at any age.^{10,11}

· Fig & Table 번호가 틀린 경우

-학술지에는 Fig. 2B라고 나와 있지만, 표 2에는 A, B가 없고, 표 1이 A, B로 나뉘어져 있음.

-Table 1, 2 다음에 3번 없이 Table 4가 나오는 경우

· Fig 1B, Fig 2A와 Fig 2B가 나뉘어져 있는데, 본문에서는 Fig 2로만 언급한 경우 (kjo-21-45)



Fig. 1A. Slit-lamp photograph at initial presentation. Severe corneal edema, hyphema, exudative membranes on anterior lens surface, and mid-dilated pupil.



Fig. 2A. Slit-lamp photograph on the day 2 after intravitreal injections. Totally opaque cornea and inferior protrusion of the eyeball.



Fig. 1B. B-scan ultrasonograph at initial presentation. Moderate vitreous opacities.



Fig. 2B. B-scan ultrasonograph on the day 2 after intravitreal injections. Increased and condensed vitreous opacities.

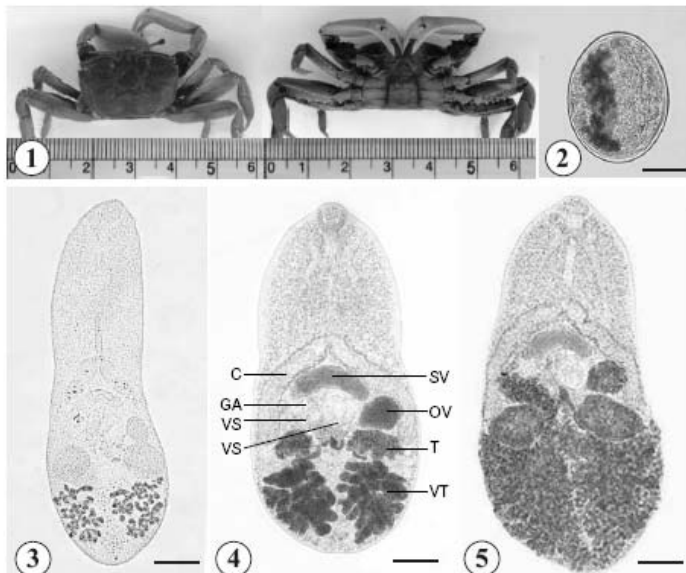
- Fig 2a, 2b 본문 언급 fig에는 a, b 표시 없음



Fig. 2. Photos of an unidentified metacercaria type 1 (Us-1) (left) and an unidentified metacercaria type 2 (Us-2) (right). $\times 40$.

recovered only from the cage-reared catfish. The only species of zoonotic metacercariae recovered was *Haplorchis pumilio*, whose prevalence was 0.7% (3/459). These encysted metacercariae were identified by their elliptical shape, size (0.16-0.19 \times 0.14-0.16 mm), possession of 36-42 hooklets on the ventral sucker, and O-shaped excretory bladder. The putative non-zoonotic *Exorchis oviformis* was identified by its 0.18-0.20 \times 0.14-0.15 mm size, thin transparent cyst wall, prominent eye spots lateral to the pharynx, and ventral sucker smaller than the oral sucker; it occurred in 0.9% of catfish (4/459). An unidentified metacercaria species (Us-1, Fig. 2a) was present in 1.1% (5/459). Among the 3 districts, the prevalence of *H. pumilio* was 0.5% in Chau Phu (involving 2 communes), and 1.8% in Chau Thanh district (one commune); no metacercariae were recovered from catfish

- Fig. 1번-5번까지가 하나의 통 image로 되어 있는 경우 (kjp-45-199)



Figs. 1-5. The crab host, a metacercaria and adults of *Cybaecotyle squamatorolae*. Fig. 1. Dorsal (left) and ventral (right) views of the shore crab, *Macrophthalmus dilatatus*, the second intermediate host. Fig. 2. A metacercaria from the crab, encysted. Bar = 120 μ m. Fig. 3. An excysted metacercaria, showing the oral, ventral suckers, ovary, testes, cirrus sac, genital atrium, and vitelline follicles. Bar = 50 μ m. Fig. 4. A 2-day-old juvenile worm recovered from an experimental rat, stained with Semichon's acetocarmine. Two ceca (C), an ovary (OV), 2 ventral suckers (VS), genital atrium (GA), testes (T), vitellaria (VT), and cirrus pouch with seminal vesicle (SV) are easily recognized. Bar = 60 μ m. Fig. 5. A 6-day-old adult fluke recovered from a rat, stained with Semichon's acetocarmine. Numerous eggs are seen in the uterine loop, and the size of testes remarkably enlarged. Bar = 70 μ m.

2.2. 참고문헌에서의 예러

- 저자 이니셜에 소문자 사용, 띄어쓴 경우 (kjp-45-59)

Montoya, J, Maestre A, Carmona J, Lopes D, Do Rosario V, Blair S (2003) *Plasmodium falciparum*: Diversity studies of isolates from two Colombian regions with different endemicity. *Exp Parasitol* **104**: 14-19.

Moore S A, Surgey E G, Cadwgan AM (2002) Malaria vaccines: where are we and where are we going? *Lancet Infect Dis* **2**: 737-743.

- 저자 last name 소문자로 시작, 저자 구분기호 “,”를 “;”으로 사용한 경우 (kjp-45-59)

Sallenave-Sales S, Daubersies P, Mercereau-Puijalono O, rahimalala L, Contamin H; Druilhe P, Daniel-Ribeiro CT, Ferreira-da-Cruz MF (2000) *Plasmodium falciparum*: A comparative analysis of the genetic diversity in malaria-mesoendemic area of Brazil and Madagascar. *Parasitol Res* **86**: 692-698.

- 저자 구분기호 “.”를 “:”으로 사용한 경우 (kjo-21-178)

14. Ridley M, Green J, Johnson G: Retinal angiomas: the ocular manifestations of von Hippel-Lindau disease. *Can J Ophthalmol* 1986;**21**:276-83.

- vol 다음에 “:” missing (kjp-45-111)

Baird JK, Leksana B, Masbar S, Fryauff DJ, Sutanihardja MA, Suradi, Wignall FS, Hoffman SL (1997) Diagnosis of resistance to chloroquine by *Plasmodium vivax*: timing of recrudescence and whole blood chloroquine level. *Am J Trop Med Hyg* **5** 621-626.

- 저자명 순이 기본적으로 <surname>, <given-names>인데 순서가 뒤바뀐 경우 (kjp-45-111)

Looareesuwan S, Wilairatana P, Krudsood S, Singhasivanon P, Treeprasertsuk S, Bussaratid V, W Chokjindachai, Viriyavejakul P, Chalermrut K, Walsh DS, White NJ (1999) Chloroquine sensitivity of *Plasmodium vivax* in Thailand. *Ann Trop Med Parasitol* **93**: 225-230.

- 저자명 사이 “,” 빠짐

Yin H Lu W, Luo J, Zhang Q, Lu W Dou H (1996) Experiments on the transmission of *Babesia major* and *Babesia bigemina* by *Haemaphysalis punctata*. *Vet Parasitol* **67**: 89-98.

- 저자명 띄어쓰기 표기가 잘못된 경우

Hamed Y, Safa O, Haidari M (2005) *Cryptosporidium* infection in diarrheic children in southeastern Iran. *Pediatr Infect Dis J* 24: 86-88.

1: [Pediatr Infect Dis J](#). 2005 Jan;24(1):86-8.

Cryptosporidium infection in diarrheic children in southeastern Iran.

[Hamed Y](#), [Safa O](#), [Haidari M](#).

PO Box: 79145-4188 Department of Parasitology, Bandar Abbas School of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran. yhamed@hums.ac.ir

In a cross-sectional study conducted in children referred to Bandar Abbas Pediatric Hospital in southeastern Iran, the prevalence of *Cryptosporidium* infection was 7%. Diarrhea lasted significantly longer in children infected with *Cryptosporidium*. There were also a significant association between *Cryptosporidium* infection and underweight children and no association with parent's occupation, breast-feeding, source of drinking water, vicinity or presence of sewage or animal exposure.

PMID: 15665718 [PubMed - indexed for MEDLINE]

- 저자명이 틀린 경우 (kjo-21-146)

11. Massin F, Audren B, Haouchine B, et al. Intravitreal triamcinolone acetonide for diabetic diffuse macular edema. Preliminary results of a prospective controlled trial. *Ophthalmology* 2004;111:218-24.

1: [Ophthalmology](#). 2004 Feb;111(2):218-24; discussion 224-5.

Intravitreal triamcinolone acetonide for diabetic diffuse macular edema: preliminary results of a prospective controlled trial.

[Massin P](#), [Audren F](#), [Haouchine B](#), [Erqinay A](#), [Bergmann JE](#), [Benosman R](#), [Caulin C](#), [Gaudric A](#).

Department of Ophthalmology, Hôpital Lariboisière, Assistance Publique-Hôpitaux de Paris, Université Paris 7, Paris, France.

(kjo-21-39)

28. Francine FB-C, Oliver G, Francois DH, et al. Decreased intraocular pressure induced by nitric oxide donors is correlated to nitrite production in the rabbit eye. *Invest Ophthalmol Vis Sci* 1996;37:1711-5.

1: [Invest Ophthalmol Vis Sci](#). 1996 Jul;37(8):1711-5.

Decreased intraocular pressure induced by nitric oxide donors is correlated to nitrite production in the rabbit eye.

[Behar-Cohen FF](#), [Goureau O](#), [D'Hermies F](#), [Courtois Y](#).

Laboratoire de développement, vieillissement et pathologie de la rétine INSERM U450, Paris, France.

- 같은 저자가 2번 반복됨 (kjo-21-6)

14. Wilson SE, Ambrosio R Jr. Wilson SE, Ambrosio R Jr. Sporadic diffuse lamellar keratitis (DLK) after LASIK. *Cornea* 2002;21:560-3.

· 페이지가 틀린 경우 (jkns-41-230)

4. Foulkes MA, Wolf PA, Price TR, Mohr JP, Hier DB : The stroke data bank : design, methods, and baseline characteristics. *Stroke* 19 : 547-541, 1988

· book title을 입력하지 않은 경우 (kjo-21-90)

3. Blumenthal M, Chen V. *Soft intraocular lenses: evolution and potential*, 1st ed. London: Wolfe, 1991:122-4

· article title을 입력하지 않은 경우 (kjo-21-74)

4. Chang JW, Choi TH, Lee HB. *J Korean Ophthalmol Soc* 2004;45:908-12.
5. Shin DB, Yang KM, Lee SB, et al. *J Korean Ophthalmol Soc* 2003;44:1748-56.
14. Yoon YM, Kim MK, Lee JL. *J Korean Ophthalmol Soc* 2005;46:1478-85.

· 저자명의 <surname>이 소문자로 표기된 경우 (kjo-21-85)

13. Moller-Pedersen T, Cavanagh HD, petrol WM, et al. Corneal haze development after PRK is regulated by volume of stromal tissue removal. *Cornea* 1998;17:627-39.

· 저자 표기 중 et al.이 중간에 들어간 경우 (jkos-48-1369)

24) Schuman JS, Wollstein G, Farra T, et al. Hertzmark E, Aydin A, Fujimoto JG, Paunescu LA. Comparison of optic nerve head measurements obtained by optical coherence tomography and confocal scanning laser ophthalmoscopy. *Am J Ophthalmol* 2003;135:504-12.

· 참고문헌 번호 순서가 틀린 경우

— 손희진 외 : 턱손 증후군의 치료 및 예후 —

저자의 경우에 술 중 열공을 보인 5안 중 4안에서 내경계막하출혈이 동반되어 내경계막 제거술을 시행하였고, 열공의 위치가 모두 10시 방향 공막절개하 부위였던 점을 미루어 볼 때, 안내 기구의 조작이 허혈로 인해 약해진 망막조직에서 열공이 발생하는데 위험 요인으로 작용할 수 있으리라 짐작된다. 따라서 수술 중에는 공막절개부위의 망막열공 발생 가능성을 염두에 두고 조심스러운 안내 기구의 조작이 필요하다 하겠다. 또한 본 연구에서는 열공이 발견되지는 않았으나 2안에서 10시 방향에 망막변성을 보여 예방적 냉응고술을 시행하여 망막박리로 진행하지 않았으며 Murjaneh et al¹³은 턱손 증후군에서 평면부유리체절제술 시 포트를 삽입하기 위한 공막절개하 부위에 예방적 팽창고 또는 냉응고 치료가 필요하다고 제안하였다.

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