

## Issuing expert opinion by forensic pathologists on sexual offences at Clinical Forensic Unit of King Chulalongkorn Memorial Hospital

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- Research Background** : *Since patients in sexual offence cases who are receiving treatment at the Clinical Forensic Unit of King Chulalongkorn Memorial Hospital are required to have a report of expert opinion from a forensic pathologist for their legal process, the authors launched a study on factors and principles employed in the process of filing expert opinion of forensic pathologists, King Chulalongkorn Memorial Hospital.*
- Objective** : *To formulate a guideline for forensic pathologists of King Chulalongkorn Memorial Hospital who are working in the process of expert opinion filing in the case of patients in sexual offence.*
- Type of Research** : *Descriptive study*
- Research Setting** : *Clinical Forensic Unit, King Chulalongkorn Memorial Hospital*
- Samples and Methodology** : *The investigators have studied victims of sexual offence who presented at the Clinical Forensic Unit, King Chulalongkorn Memorial Hospital from January 2001 (2544 BE) to June 2004 (2547 BE), i.e., 100 female patients in total. The study covers analyses of collected data from case history, physical examination, pelvic examination by forensic pathologists, outpatient record forms of King Chulalongkorn Memorial Hospital with transfer document from criminal investigator, laboratory test results of vaginal smears and case report form of forensic pathologists to criminal investigator.*

- Results** : *Factors influencing the giving of expert opinion of forensic pathologists are namely:*
- Factor 1 : Confirmed detected spermatozoa;*
- Factor 2 : Positive acid phosphatase test;*
- Factor 3 : Detected pathology around external sex organ, the hymen and within the vaginal canal;*
- Factor 4 : Detected pathology from general physical examination.*
- The expert opinions of the forensic pathologists can be divided into 4 groups, namely:*
- 1. Detected evidence of sexual intercourse or rape;*
  - 2. Probable sexual intercourse or rape;*
  - 3. Possible sexual intercourse or rape;*
  - 4. No detected evidence of sexual intercourse or rape.*
- Conclusion** : *From the study, it was found that forensic pathologists of King Chulalongkorn Memorial Hospital depended on four factors to give their expert opinion on cases of sexual offence victims. Accordingly, more than 60 % of the expert opinions given were employed following the four factors. Therefore, these factors and principles in this study should serve as guidelines for giving expert opinion on victims of sexual offence who came for investigation and treatment at Clinical Forensic Unit of King Chulalongkorn Memorial Hospital.*
- Keywords** : *Sexual offences.*

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เกษณี จงประสาธน์สุข, สุพจน์ แจ่มสุวรรณ. การให้ความเห็นของแพทย์นิติเวชเกี่ยวกับคดีความผิดทางเพศของหน่วยนิติเวชคลินิก โรงพยาบาลจุฬาลงกรณ์. จุฬาลงกรณ์เวชสาร 2549 พ.ย; 50(11): 799 – 809

- เหตุผลของการทำวิจัย** : เนื่องจากผู้ป่วยคดีความผิดทางเพศที่มารับการรักษาที่หน่วยนิติเวชคลินิก โรงพยาบาลจุฬาลงกรณ์ ต้องได้รับรายงานการลงความเห็นจากแพทย์ เพื่อผลในทางคดี ผู้วิจัยจึงทำการสำรวจถึงปัจจัยและหลักการในการลงความเห็นของแพทย์นิติเวช โรงพยาบาลจุฬาลงกรณ์
- วัตถุประสงค์** : เพื่อกำหนดแนวทางในการลงความเห็นกรณีผู้ป่วยคดีความผิดทางเพศ ของแพทย์นิติเวช โรงพยาบาลจุฬาลงกรณ์
- รูปแบบการวิจัย** : การศึกษาเชิงพรรณนา
- สถานที่ทำการศึกษา** : หน่วยนิติเวชคลินิก โรงพยาบาลจุฬาลงกรณ์
- ตัวอย่างและวิธีการศึกษา** : ผู้วิจัยได้ทำการศึกษาผู้เสียหายในคดีความผิดทางเพศที่มารับการรักษาที่หน่วยนิติเวชคลินิก โรงพยาบาลจุฬาลงกรณ์ เฉพาะเพศหญิงที่ได้รับการตรวจ ตั้งแต่เดือน มกราคม ปี พ.ศ. 2544 ถึง เดือน มิถุนายน ปี พ.ศ. 2547 จำนวน 100 ราย โดยทำการศึกษาจากบันทึกรายงานประวัติ การตรวจร่างกาย การตรวจภายในของแพทย์นิติเวช บันทึกเวชระเบียนผู้ป่วยนอกของโรงพยาบาลจุฬาลงกรณ์ ร่วมกับใบส่งตัวของพนักงานสอบสวน ผลการตรวจสิ่งขีดป้ายช่องคลอดทางห้องปฏิบัติการ และใบรายงานของแพทย์นิติเวชต่อพนักงานสอบสวน
- ผลการศึกษา** : ปัจจัยที่มีผลต่อการลงความเห็นของแพทย์
- ปัจจัยที่ 1 คือ การตรวจพบตัวอสุจิ
  - ปัจจัยที่ 2 คือ การตรวจ Acid phosphatase ให้ผลบวก
  - ปัจจัยที่ 3 คือ การพบพยาธิสภาพจากการตรวจบริเวณอวัยวะเพศ ภายนอก เยื่อพรหมจรรย์และภายในช่องคลอด
  - ปัจจัยที่ 4 คือ การพบพยาธิสภาพจากการตรวจร่างกายทั่วไป
- ความเห็นของแพทย์สามารถแบ่งออกเป็น 4 กลุ่มดังนี้
1. พบหลักฐานผ่านการร่วมประเวณี หรือ ถูกกระทำชำเรา
  2. สันนิษฐานว่าน่าจะผ่านการร่วมประเวณี หรือ ถูกกระทำชำเรา
  3. สันนิษฐานว่าอาจจะผ่านการร่วมประเวณี หรือ ถูกกระทำชำเรา
  4. ไม่พบหลักฐานผ่านการร่วมประเวณี หรือ ถูกกระทำชำเรา

- สรุป** : จากการศึกษพบว่าแพทย์นิติเวช โรงพยาบาลจุฬาลงกรณ์ ใช้ปัจจัย ทั้งสี่ เป็นเกณฑ์ในการลงความเห็นกรณีผู้ป่วยความผิดทางเพศตาม กลุ่มความเห็นทั้งสี่มากกว่า 60 % ดังนั้นปัจจัยและหลักการในการ ศึกษาที่น่าจะใช้เป็นแนวทางในการลงความเห็นกรณีผู้ป่วยความผิด ทางเพศที่มารับการตรวจรักษาที่หน่วยนิติเวชคลินิก โรงพยาบาล จุฬาลงกรณ์ได้
- คำสำคัญ** : ความผิดทางเพศ.

As the number of sexual offence, i.e., rape, sexual harassment, lewd and obscene behaviors, has currently been on the rise, forensic pathologists have more roles in examination and giving their expert opinions on cases of rape which are crucial to the ruling of the judges. The investigators have realized the significance of expert opinion of forensic pathologists, regarding the factors in passing their judgment, and the weighting of related evidence. In this study 100 cases of women were reviewed. They had filed charges with criminal investigators that they were raped and were referred for physical examination, <sup>(1)</sup> pelvic examination and laboratory test to detect spermatozoa and acid phosphatase at the Clinical Forensic Unit, King Chulalongkorn Memorial Hospital, by forensic pathologists of King Chulalongkorn Memorial Hospital. Their expert opinions can be classified into 4 groups, namely:

1. Detected evidence of sexual intercourse or rape; <sup>(2)</sup>
2. Probable sexual intercourse or rape;
3. Possible sexual intercourse or rape;
4. No detected evidence of sexual intercourse or rape. <sup>(2)</sup>

The expert opinions are based on laboratory results, i.e., whether spermatozoa was detected, whether acid phosphatase test was positive or negative, plus detection of the pathology from pelvic examination and physical examination. <sup>(3)</sup>

In this study the patients are subsequently divided into 3 groups, according to their age: lower than 13 years old, between 13 years old and 15 years old, and higher than 15 years old, according to the degree of penalties as defined in Thailand's Criminal Laws on sexual offence, article 276 and 277. <sup>(4)</sup>

## Methodology

The investigators studied accusers in sexual offence who came for treatment at Clinical Forensic Unit, King Chulalongkorn Memorial Hospital from January year 2001 (2544 BE) to June 2004 (2547 BE). The study was based on case records, history of the cases, findings of physical examination, pelvic examination of forensic pathologists, outpatient record forms of King Chulalongkorn Memorial Hospital with refer documents of criminal investigators, test results of vaginal swabs, and case reports of forensic pathologists to criminal investigators. In this studied, had 100 sexual offence cases who had all factors that the investigators need to study. It was about 80 % of all the sexual offence cases in the time of this study.

## Result

### 1. Number of patients according to age groups

The subjects are patients who are accusers in criminal cases of sexual offence who came for treatment at Clinical Forensic Unit of King Chulalongkorn Memorial Hospital (Faculty of Medicine, Chulalongkorn University) from January 2001 (2544 BE) to June 2004 (2547 BE). In total, there were 100 women. The youngest one was 3 years old, and the oldest 53 years old. Forty-one of them were younger than 13 years old; 29 were 13 -15 years old; 30 were older than 15 years old.

### 2. Results from general physical examinations

Among those who were younger than 13 years old, physical wounds were found in 7 cases (17.1 %), in 34 cases (82.9 %) no physical injury was found. Among those who were 13-15 years old, physical injury was detected in 6 cases (20.7 %), and in 23 cases

(79.3 %) not detected physical injury was not found. Among those who were older than 15 years, physical injury was found in 9 cases (30 %), and was not detected in 21 cases (70 %).

### 3. Results of physical examination on external sex organ, the hymen and within the vaginal canal.

Among those who were younger than 13 years old, new fresh wounds were found on the external sex organ, the hymen and vaginal canal in 12 cases (29.27 %). Old wounds on the external sex organ, the hymen and vaginal canal were found in 10 cases (24.39 %), and in 19 cases (46.34 %) no wound was found on the external sex organ, the hymen and vaginal canal.

Among those who were 13-15 years old, detected new fresh wounds were found on the external sex organ, the hymen and vaginal canal in 6 cases (20.69 %). Old wounds on the external sex organ, the hymen and vaginal canal were found in 12 cases (41.38 %), and in 11 cases (37.93 %) no wound was found on the external sex organ, the hymen and vaginal canal.

Among those who were older than 15 years old, detected new fresh wounds were found on the external sex organ, the hymen and vaginal canal in 3 cases (10 %). Old wounds on the external sex organ, the hymen and vaginal canal were found in 10 cases (33.33 %), and in 17 cases (56.67 %) no wound was found on the external sex organ, the hymen and vaginal canal.

### 4. Laboratory results from spermatozoa tests from vaginal swabs

Among those who were younger than 13 years

old, spermatozoa were detected 7 cases (17.07 %); spermatozoa were not detected in 34 cases (82.93 %). Among those who were between 13-15 years old, spermatozoa were detected in 5 cases (17.24 %), not detected in 24 cases (82.76 %). Among those who were older than 15 years old, spermatozoa were detected in 10 cases (33.33 %), and not detected in 20 cases (66.67 %).

### 5. Results of laboratory test for acid phosphatase from vaginal swabs

In patients who were younger than 13 years old, acid phosphatase was positive in 8 cases (19.51 %); negative in 33 cases (80.49 %). Among the patients who were between 13 -15 years old, acid phosphatase was positive in 7 cases (24.14 %); negative in 22 cases (75.86 %). Among those who were older than 15 years old, the test was positive in 9 cases (30 %), and negative in 21 cases (70 %).

The study of the giving of expert opinion by forensic pathologists in sexual offence shows that the investigators had based their expert opinion on four factors, namely:

Factor 1 : detected spermatozoa;

Factor 2 : acid phosphatase test positive;

Factor 3 : detected pathological finding from external investigation of the sex organ, the hymen and the vaginal canal;

Factor 4 : detected pathological finding from general physical examination.

The forensic pathologists did not depend on history of given by the accusers in their giving expert opinions, as the information could not be verified by medical evidence.

Expert opinions of forensic pathologists can be

divided into 4 groups as follows:

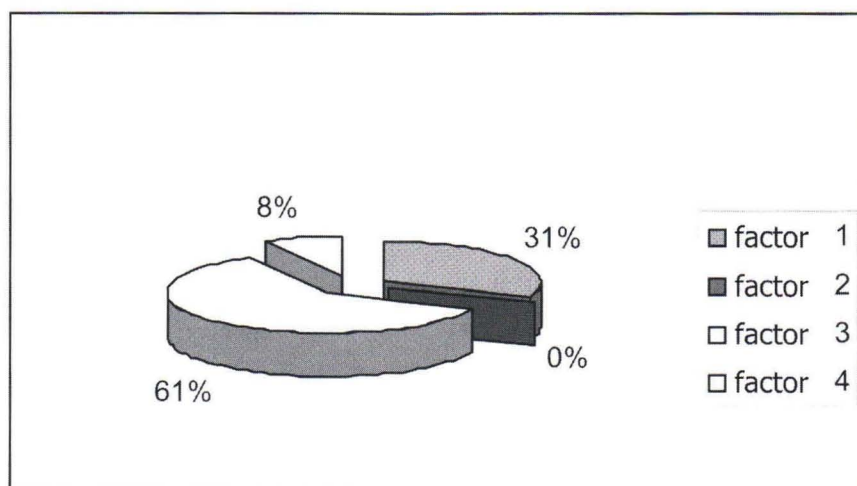
1. Detected evidence of sexual intercourse or rape;
2. Probable sexual intercourse or rape;
3. Possible sexual intercourse or rape;

4. No detected evidence of sexual intercourse or rape.

As for the expert opinions that confirmed evidence of sexual intercourse or rape, all the 13 cases were based on the four factors in issuing expert opinion.

**Table 1.** Group 1: expert opinion confirms detected evidence of sexual intercourse.

Number	spermatozoa	AP	Pelvic examination	Physical examination
1	detected	Negative	not detected	not detected
2	detected	Positive	not detected	Detected
3	not detected	Negative	detected	Detected
4	detected	Positive	detected	Detected
5	detected	Positive	detected	not detected
6	detected	Positive	detected	Detected
7	detected	Positive	detected	not detected
8	detected	Positive	not detected	Detected
9	detected	Positive	not detected	not detected
10	detected	Negative	detected	not detected
11	detected	Negative	detected	Detected
12	detected	Negative	detected	Detected
13	detected	Positive	not detected	Detected



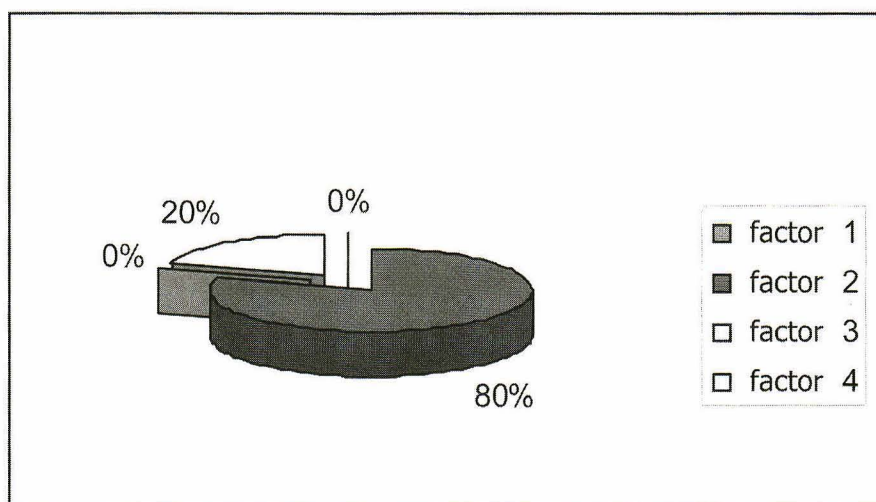
**Diagram 1.** Expert opinions that confirmed detected evidence of sexual intercourse (group 1).

As for the expert opinions that confirmed probable experience of sexual intercourse or rape of the 5 cases, they were based on the four factors in issuing expert opinion.

As for the expert opinions that confirmed probable sexual intercourse or rape in 3 cases, they were based on the four factors in issuing expert opinion.

**Table 2.** Expert opinions that confirmed probable sexual intercourse (group 2).

Number	Spermatozoa	AP	Pelvic examination	Physical examination
1	not detected	negative	detected	not detected
2	not detected	positive	detected	not detected
3	not detected	positive	not detected	not detected
4	not detected	positive	detected	detected
5	not detected	positive	not detected	detected

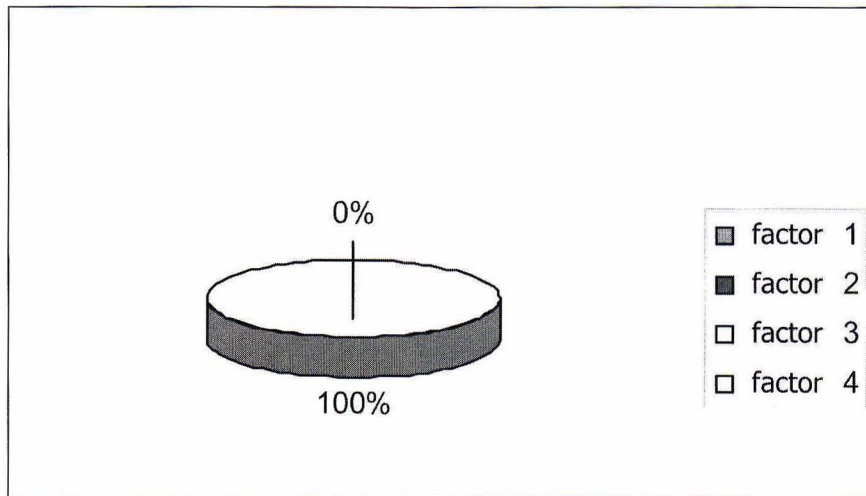


**Diagram 2.** Expert opinions that confirmed probable sexual intercourse.

**Table 3.** Expert opinions that confirmed possible sexual intercourse (group 3).

Number	Spermatozoa	AP	Pelvic examination	Physical examination
1	not detected	Negative	detected	not detected
2	not detected	Negative	detected	not detected
3	not detected	negative	detected	not detected



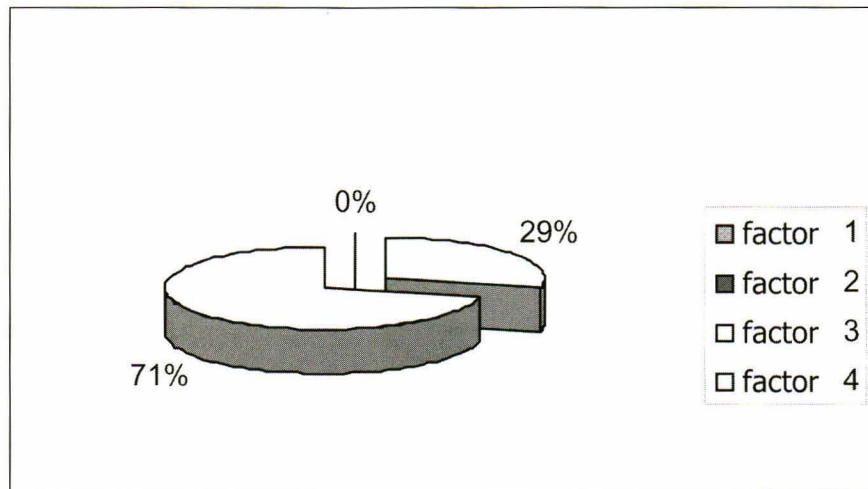


**Diagram 3.** Expert opinions that confirmed possible sexual intercourse (group 3).

As for the expert opinions that confirmed no evidence of sexual intercourse or rape, in 14 cases, they were based on the four factors in issuing expert opinion.

**Table 4.** Expert opinions that confirmed no detected evidence of sexual intercourse (group 4).

Number	spermatozoa	AP	Pelvic examination	Physical examination
1	not detected	Negative	not detected	not detected
2	not detected	Negative	not detected	not detected
3	not detected	Negative	detected	not detected
4	not detected	Negative	detected	not detected
5	not detected	Negative	not detected	not detected
6	not detected	Negative	not detected	not detected
7	not detected	Negative	detected	not detected
8	not detected	Negative	not detected	not detected
9	not detected	Negative	detected	not detected
10	not detected	Negative	not detected	not detected
11	not detected	Negative	not detected	not detected
12	not detected	Negative	detected	not detected
13	not detected	Negative	not detected	not detected
14	not detected	Negative	detected	not detected



**Diagram 4.** Expert opinions that confirmed no evidence of sexual intercourse (group 4).

## Discussion

In the group that expert opinion confirmed detected evidence of rape or sexual intercourse, in 4 cases (30.77 %) the forensic pathologists were only dependent on detection of spermatozoa; in 8 cases (61.5 %) they were dependent on both detection of spermatozoa and acid phosphatase; in 0 case that was solely dependent on acid phosphatase test, and in 1 cases (7.6 %) they were solely dependent on general physical examination and pelvic examination.

From the data, it is shown that if the laboratory test result was "detected spermatozoa and acid phosphatase was positive", most forensic pathologists (61.5 %) issued their expert opinion: "the investigation detected evidence of sexual intercourse or rape", whereas in the case that spermatozoa was the only positive finding, forensic pathologists issued their opinion (30.77 %): "the investigation detected evidence of sexual intercourse" whereas when acid phosphatase was the only positive finding, no forensic pathologist issued their expert opinion that belongs to the category.

As for the expert opinions of forensic pathologists in group 1: "detected evidence of sexual intercourse or rape," most forensic pathologists used the evidence of detected spermatozoa in their issue of expert opinion more than others.

As for the expert opinions of forensic pathologists in group 2: "probable rape or sexual intercourse," in all the 5 cases, there was no detected spermatozoa and they were only positive acid phosphatase test and/or plus positive physical examination and pelvic examination in 4 cases (80 %); and in 1 cases (20 %) was it was dependent on physical examination and pelvic examination alone.

From the data, it is shown that if the laboratory test result was negative spermatozoa but acid phosphatase test was positive most forensic pathologists (80 %) issued their expert opinion: "probable rape or sexual intercourse," regardless of the result of the general physical examination and pelvic examination, as from a positive acid phosphatase test does not mean acid phosphatase is only from sperm as there are other natural sources

of acid phosphatase which can make the laboratory result positive, for example, vaginal secretion, breast milk, snake venom, and broccoli.

Expert opinion of doctors in group 2: "probable sexual intercourse or rape," most forensic pathologists depended on negative test of spermatozoa but acid phosphatase was positive whether or not the general physical examination or pelvic examination was positive.

In the group that expert opinion indicated: "possible sexual intercourse or rape," which included 3 cases, there was no detected spermatozoa or acid phosphatase test, but in these 3 cases, the results of physical examinations were (100 %) positive. From the data, it is shown that if the laboratory test results was detected spermatozoa and acid phosphatase test was negative, no matter the pelvic examination or the general physical examination was positive or not, the forensic pathologists issued their expert opinion for this group based on detected injury in the hymen cannot really verify a penetration of a penis into it in an act of sexual intercourse, as the wound could have been produced from other trauma, for example, sport injury or instrumentation of a sex toy.

In the case that the physical examination was the only means that shows positive result or the finding shows no detected evidence, every forensic

pathologist gave their expert opinion "not detected evidence of sexual intercourse or rape," as physical injury could have happened from various courses and are not specific to cases of sexual offence.

The investigators hope that this study will be the guide for expert opinion of doctors, not only for forensic physicians but for general physicians, too. In the future this study might be useful for further forensic study.

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