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A Trend of Studies on Extubation in Japan by Text-Mining Tool

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Background

- Preventing medical accidents is an urgent task for nursing to reduce the number of malpractice lawsuits that have been on the rise in recent years.

- Self-extubation by patients is an accident which could be lead to the termination of patients' lives.

Purpose-1

- Since accidental occurrence of self-extubation can be expected in the situations facing diverse issues such as course of treatment and nurses' busyness, an analysis of its specific causes and development of measures against it are necessary.

Purpose-2

- This study revealed a trend of studies on extubation including self-extubation as a first step for considering causes of self-extubation and measures against it.

Method

- As a result of searching Japana Centra Revuo Medicina ("Ichushi" hereafter) for trend of studies on extubation with the search criteria "extubation," 2,601 studies were extracted in Ichushi.

- The extracted literature subjects were analyzed by text-mining approach.

Results-1

- Studies on extubation are listed after 1982, and at least 25 studies are listed annually after 2000. As a result of word frequency analysis, words such as "1 case," "anesthesia," "trachea," and "supervision" were frequently used.
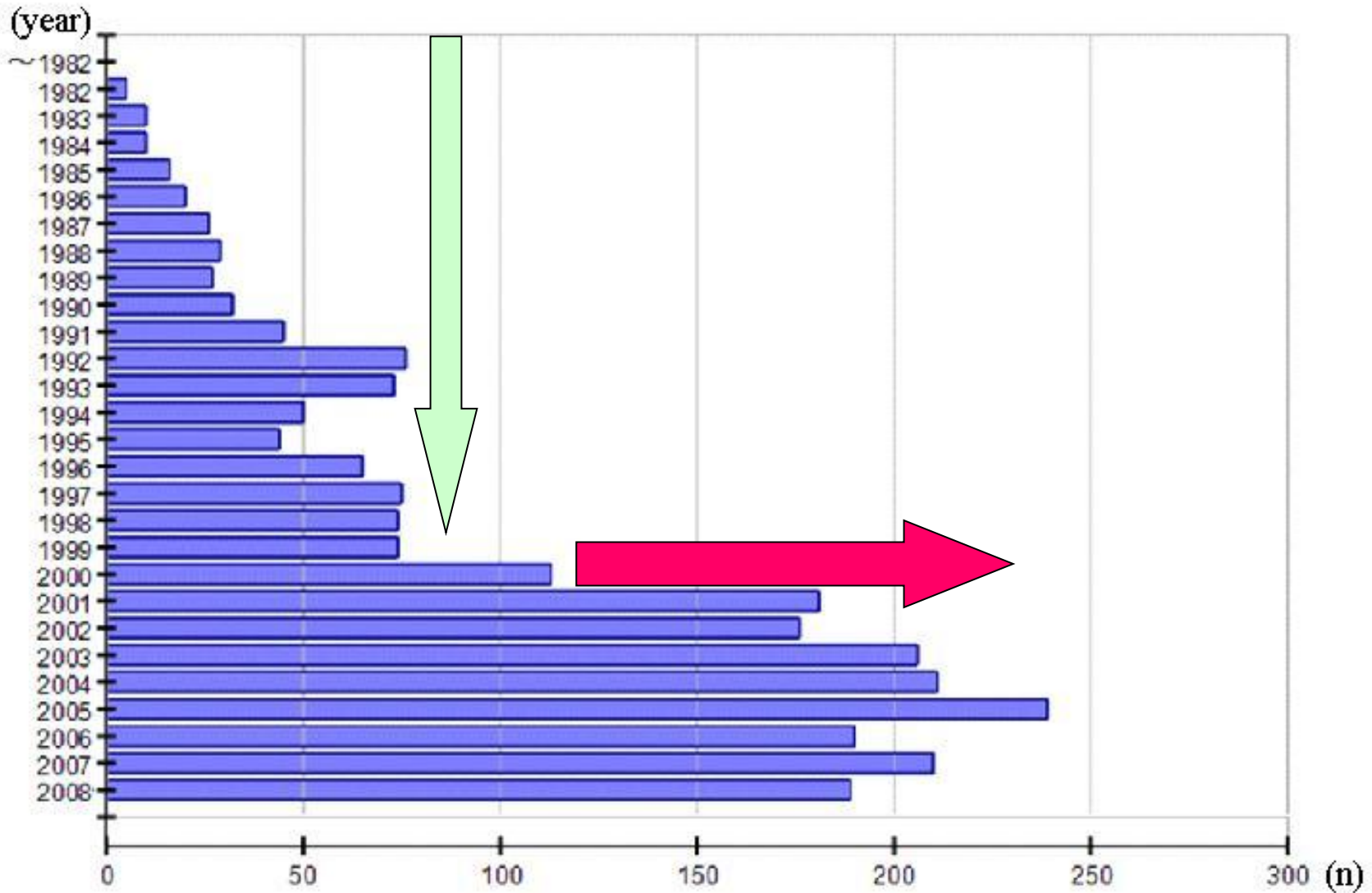
Results-2

Fig-1 The number of literature according the year

Results-3

- Reference of original texts revealed that these studies were on "an example" or "a case" in which complication of artificial ventilation occurred or in which rare disease or progression was observed and that a large number of case studies and case reports were published.
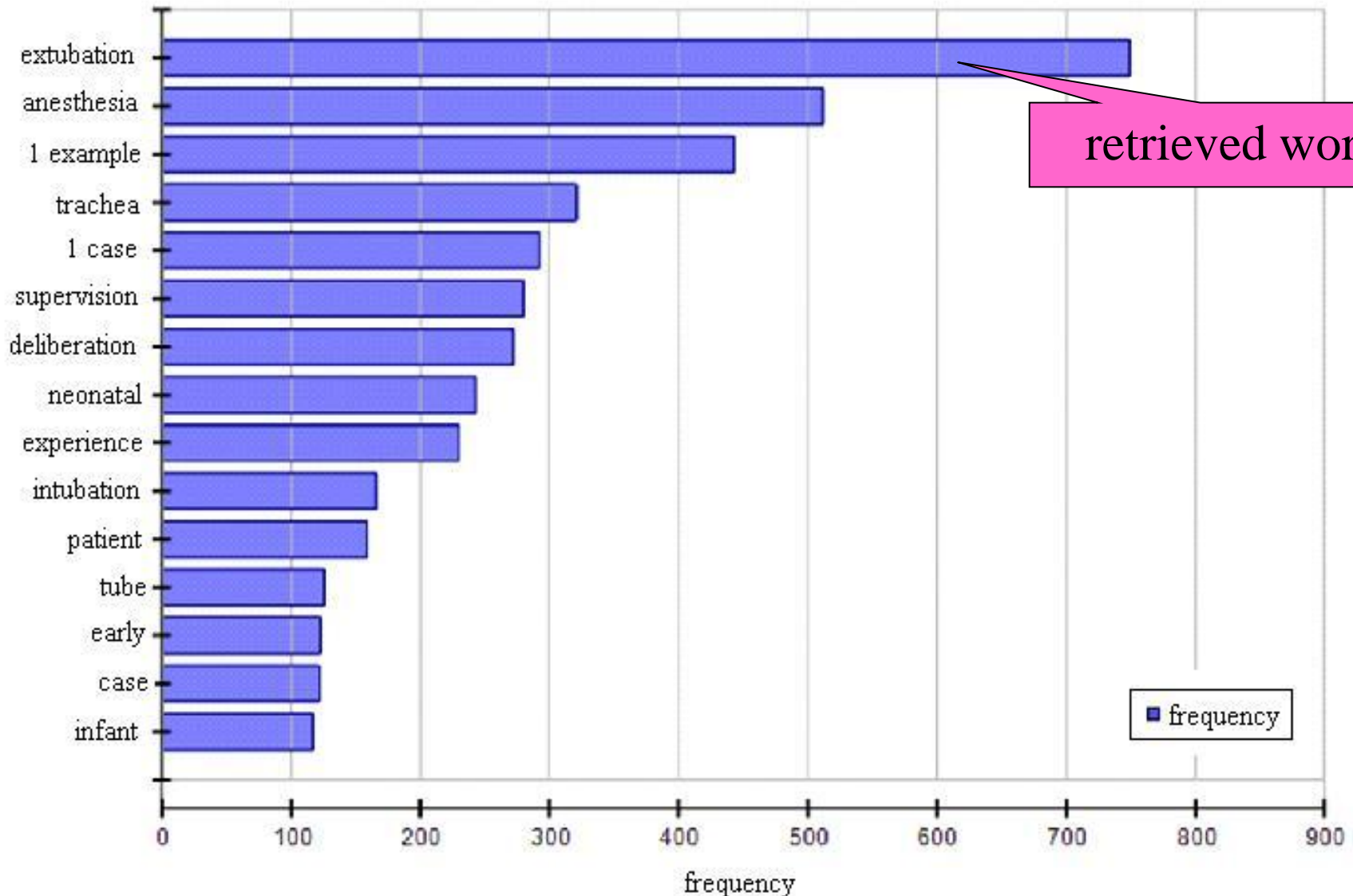
Results-4

Fig-2 The word frequency analysis (higher 15 words)

Discussion-1

- It was suggested that the increase in number of studies after 2000 was influenced by a massive U.S. study on artificial ventilator conducted in 2000.

Discussion-2

- The fact that there are a large number of case studies and case reports seems to indicate that clinical knowledge is built for dealing with many clinical cases by analyzing individual condition and accumulation of the results since the causes of extubation are diverse.

Discussion-3

- While this study revealed the trend of studies on extubation as a whole including self-extubation, an analysis focused on self-extubation is to be made in the future.