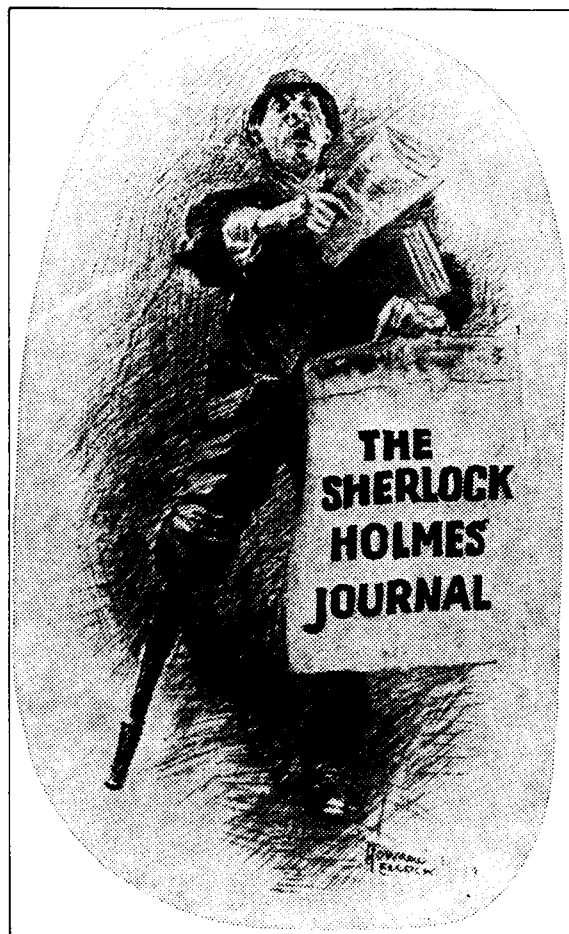


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# Sherlock Holmes and the World Medical Literature 1966 Onwards

PART 1: 1966-1980

by JOHN S. GILBODY

**A**S A LONG-TERM FAN of Sherlock Holmes, it was natural that during my six years training at Guy's Hospital I should develop an interest in the medical side of the Canon. Indeed, I spent many happy hours reading late 19th century volumes of the *British Medical Journal* and *Lancet*! The impact of Holmes on contemporary medical literature also interested me, and, prompted by becoming a member of the Society, I thought it might be interesting to other members to commit some of the findings made to paper.

## **Background to the present article**

The Sherlock Holmes stories are inextricably linked with medicine, largely as a result of the medical training and experiences of Dr John H. Watson and his literary agent, Sir Arthur Conan Doyle. It is also well-known that Doyle was greatly influenced by Dr Joseph Bell, one of his teachers at medical school, whom he said had an "eerie trick of spotting details. If he were a detective, he would surely reduce this fascinating, but unorganised business into something nearer to an exact science" (Doyle, 1924). Another link is that Holmes may have been named after a Dr Oliver Wendell Holmes of Boston (Dirckx, 1979). Little wonder, then, that Holmes remains a subject of much interest and relevance to the medical profession. Indeed, within the 60 Holmes stories are references to 68 diseases, 32 medical terms, 38 doc-

tors, 22 drugs, 12 medical specialties, 6 hospitals, 3 medical journals and 2 medical schools (Westmoreland and Key, 1991).

Interestingly, Doyle himself did not appear to believe that Holmesian methods were as suitable for medicine as they are for detection, and in an address in 1910 to students at St Mary's Hospital in London on "The Romance of Medicine", he warned against undue materialism and intellectual priggishness, and said that he had "known men in the profession who were stuffed with accurate knowledge, and yet were so cold in their bearing, and so unsympathetic in their attitude . . . that they left their half-frozen patients all the worse for their contact" (Doyle, 1910). He emphasised "the value of kindness and humanity as well as of knowledge". This view is supported by the following quotation from *The Times* (22nd April 1981): "The hospital, with its specialised equipment, focuses on disease [and] often leads to depersonalisation, of doctor and patient alike. The doctor becomes a medical Sherlock Holmes. In the process the patient may feel that he has ceased to be a person and has become a case". The reader must decide which approach to medicine is the most desirable, although I hope it would be both!

## **Materials and methods**

A literature search was conducted using the Medline CD-ROM database into all articles written

about or containing references to Sherlock Holmes in the world medical literature from 1966 onwards (1966 was the earliest Compact Disc available). This database is compiled by the National Library of Medicine, United States Department of Health and Human Sciences, and is distributed in Great Britain under licence by Cambridge Scientific Abstracts. It covers medical journals, but not the many excellent books written on medical aspects of the Canon and its creator (Rodin and Key, 1992; Smithers, 1990; Accardo, 1987; Shepherd, 1985; Rodin and Key, 1984; Simpson, 1983; Gerber, 1983; Liebow, 1982; Key, 1981; Van Liere, 1959).

## LITERATURE SEARCH RESULTS AND DISCUSSION

### General finding

There was a significant increasing trend in the number of medical references made to Sherlock Holmes between 1966 and 1992, indicating a continuing healthy interest in the Canon, perhaps accentuated by the 1987 centenary of Stud. In the following text, references are considered in chronological order, excluding those in which only a fleeting mention of Holmes was made — usually as a symbol of careful observation and deduction (Beck, 1992; Horn, 1991; Epstein *et al.*, 1991; Van Wallendael and Hastie, 1990; Daschner, 1988; Zapata, 1987; Serup, 1987; Kanterman, 1983; Portioli and Valcavi, 1981; Nance, 1980; Ackerman, 1978; Petrone, 1978; Elfenbaum, 1971; Anonymous, 1970). In addition, relevant items not included in the Medline database from other (principally Sherlockian) sources are discussed.

### 1966

In April, David Musto of Yale University published a paper in the *Journal of the American Medical Association* (JAMA) on Sherlock Holmes and heredity, citing examples of Holmes's close observation of family traits such as his deduction from family portraits in Houn that Stapleton was a Baskerville. He noted how Holmes's mentor, Joseph Ball, contributed an article in 1900 to the *Scottish Medical and Surgical Journal* on heredity in disease, and how Holmes himself wrote a monograph "On the Variability of Human Ears" for the *Anthropological Journal* in 1888, a subject which of course served him so well in Card. Unfortunately, the British Library does not appear to stock the *Anthropological Journal*.

Many of Holmes's inferences regarding heredity would be viewed as incorrect today, such as his belief in "reversion" to explain wickedness (Houn), the inheritance of general personality traits (Spec, Copp) and his deduction of the character of families from the behaviour of their pets (Cree)! Nevertheless, these views were consistent with prevailing concepts at the time, and did not interfere with the solution of prob-

lems. Finally, Musto considered Holmes's own ancestry, suggesting that he may have been so cognizant of hereditary features because of the remarkable inherited traits in his own family, such as the superior intelligence and powers of observation and deduction shared with his brother Mycroft. Thankfully for us, however, Sherlock did not share his brother's laziness and Diogenical interests!

### 1968

A further article by Musto in JAMA considered the relationship between cocaine, Sherlock Holmes and Sigmund Freud. Musto pointed out how Holmes's own use of cocaine would have evoked no suspicion in contemporary society. Indeed, even the 78-year-old President of the British Medical Association, Sir Robert Christison, reported how chewing coca leaves enabled him to walk 15 miles and accomplish other arduous tasks without exhaustion, and cocaine was an ingredient of Coca-Cola until 1903! Musto proposed that Holmes suffered from occasional melancholia, not unusual in a man of creativity, which he self-treated with cocaine. There is no doubt that Holmes's cocaine use ultimately became a problem, however, which Holmes later referred to in Miss as an "instrument of evil". Musto proposed that this problem reached a critical stage in Fina, when Holmes exhibited signs of chronic cocaine use, namely a suspicious frame of mind, leading him to weave elaborate schemes to explain facts of whose significance only he was aware. One would easily question the claim that Moriarty was a figment of a deranged imagination, however. Nevertheless, Watson may have turned to the medical journals for help with Holmes, as indicated by the following quotation from the *Lancet*:

#### "COCAINE CRAVING

To the Editors of THE LANCET

Sirs, — I have a patient who suffers from cocaine craving. I find it impossible to keep cocaine out of his reach. This habit has brought him into a very low state of health. Perhaps some of your readers might be able to give me some suggestions as to treatment. I have tried the usual remedies in vain. He suffers from great nervousness, sleeplessness, and has become very thin. — I am, Sirs, yours truly,

Oct. 28th, 1890

IRENE"

The pseudonym Irene would of course fool no Sherlockian. So did Holmes need treatment? Musto proposed that Holmes may have turned to Sigmund Freud, the Viennese neurologist, for help between 1891-4. Nicholas Meyer, of course, jumped on this for his novel *The Seven Percent Solution*, but, whatever happened, cocaine use had ceased to be a problem for Holmes when he returned to London in 1894. Interestingly, a review in the *Sunday Times* (26th February 1984) of "*Freud and the Culture of Psychoanalysis*" by Steven Marcus, commented on

how “both Sherlock Holmes and Freud relied upon the overlooked, significant detail. What others dismissed as trivial often proved to be the key to unravelling the puzzle.” It is possible, therefore, that Holmes repaid Freud for his psychiatric attentions in kind!

In a further article in JAMA on “Murder in Medical Education”, Anderson discussed the relevance of detective fiction to medicine, and in particular how to use Sherlock Holmes as a model for medical education. The only other reference to Holmes in 1968 was a report on a certain Sherlockian party’s trip to Switzerland, comprising a learned Queen’s Counsel as Moriarty, senior civil servant as Sherlock Holmes and Dr (later Sir) Maurice Campbell of Guy’s Hospital as a boisterous Dr Watson (Lister, 1968). What Society they represented we can only guess . . .

### 1969

In a letter to JAMA entitled “Holmesian Observation Without Deduction”, Nusynowitz recounted the case of a drug company representative noted to have acromegaly, a condition resulting from excessive growth hormone secretion (as suffered by the character Jaws in the James Bond films). The man had had the condition for about 5 years, during which time he saw about 10,000 physicians in the course of his job, none of whom spotted his problem. Dr Nusynowitz thus concluded how, despite the sophistication of modern medical equipment, the eyeball, properly used, remains an excellent diagnostic tool!

### 1972

In the Spring, Craig published a paper on ophthalmological aspects of the Canon, but this unfortunately was unobtainable.

### 1974

Of interest to medical Sherlockians may be an article by Surgeon Captain H. Curjel published in the Autumn 1974 issue of *The Sherlock Holmes Journal* (SHJ), entitled “A Day in the Life of Young Stamford”, the doctor who introduced Watson to Holmes in Stud. Curjel made a further medical contribution to the *SHJ* in a letter dated August 1979 concerning Dr James Mortimer, and how he could be a general practitioner with the single Conjoint Diploma of M.R.C.S. (Member of the Royal College of Surgeons). The answer was that by 1870 the M.R.C.S. was a comprehensive examination in Surgery, Medicine and Midwifery, whereas the Conjoint Diploma was only established in 1886. Curjel further discussed why Mortimer declined Holmes’s courtesy address of “Doctor”, possibly because Mortimer’s hopes of a consulting practice had been dashed by his marriage, such that his phrase “Mister, Sir . . . a humble M.R.C.S.” really meant “alas . . . not an F.R.C.S.”.

### 1975

A series of letters appeared in the *Canadian Medical Association Journal* concerning the link between Sherlock Holmes and Marfan’s syndrome, an hereditary connective tissue disease. Cooperman proposed that Jefferson Hope in Stud exhibited signs of Marfan’s syndrome, and, assuming this to be the case, that Doyle had predated Marfan’s classic description of the syndrome in 1896! Redmond, the Chief Librarian at Queen’s University in Kingston, Ontario, wrote to add that Stud had in fact been published in late 1887, and written not later than 1886, thus making Doyle’s description more than a decade older than Marfan’s, and all the more remarkable as Doyle had then only just left medical school. Bates contested Cooperman’s diagnosis, proposing syphilis as an alternative, but, in reply, Cooperman pointed out that syphilitic heart and blood vessel disease have no specific predilection for tall people like Jefferson Hope, and that Hope was rather young to have died of a syphilitic aneurysm. From the available evidence, Cooperman’s diagnosis (of ‘Doyle’s syndrome’!) would seem the most plausible.

### 1977

An article by Smith and Beerman in the *International Journal of Dermatology* discussed the links between Sherlock Holmes and dermatology, pointing out how skin specialists above all others follow closely the teachings and methods of Holmes. Interestingly, this is a claim that has been made by a number of medical specialists. Nevertheless, there is no doubt that the Canon contains many references to skin problems, and Holmes is known to have carried out basic research into postmortem bruising (Stud), and written monographs on the various dyes and techniques of tattooing, and effects of trades on the form of the hands. The latter monograph may well have been a model for Ronchese’s book *Occupational Marks*, published in 1948. The two key dermatologically related stories in the Canon, Blan and Lion, which curiously were the only two stories to be related by Holmes himself, are considered in the 1983 section later.

In an editorial in JAMA, Vaisrub drew parallels between medicine and detection, and recalled Snow’s classification of detective stories as either ‘classical’ or ‘romantic’ (Snow, 1977). In classical stories, such as those written by Doyle and Edgar Allan Poe, the detective solves his cases by deductions based on observation and logic, much like the scientist, whereas in the romantic type of story, epitomized by Dashiell Hammett, the detective is unpredictable, intuitive, and emotional. Vaisrub commented that although these two extreme types of medical diagnostician undoubtedly exist, such metaphors are oversimplified, and there is for instance a third type of medic, the technological diagnostician, who is more at home with computers, scanners, and fibre optic instruments than with the history and physical exami-

nation. Nevertheless, useful parallels can be drawn between medicine and detection, as shall be seen later.

### 1978

An interesting series of papers on Holmes appeared in the journal *Transactions and Studies of the College of Physicians of Philadelphia*, although this source is not readily available in London. One of these articles, by Aronson, discussed aspects of forensic pathology in the Canon; the interested reader is recommended to look up as a substitute Jenny Ward's excellent paper "Sherlock Holmes and Forensic Investigation", published in the Winter 1991 issue of the *SHJ*, which considered the extent of Holmes's knowledge in such areas as tobacco and the typewriter, and how it compared with contemporary forensic science. Ward concluded that, whilst the popularity of Holmes and Watson has led to a present day public perception that they were the only scientific detectives of the period, they were in fact only two of an élite band of consulting forensic experts.

On a related theme, *The Times* in July 1986 carried a piece on an article in the *Journal of the Forensic Science Society* which bestowed upon Holmes the accolade of being the father of modern forensic science (*SHJ* Editorial Notes, Winter 1986). Those in favour of this view included an Indian expert citing Holmes's work with plaster of paris, and a Frenchman who wrote in the mid-1920s that Holmes had inspired his own innovation in the theory of interchange — the reciprocal transfer of material through contact; for example, an attacker stabs someone and then leaves blood on a door-knob. Against this view of Holmes was a former director of the Metropolitan Police Forensic Laboratory, Dr Henry Walls, who told *The Times* that the science in the Canon was "ridiculous", and that Holmes's ideas about typewriters having as much individuality as a man's handwriting have no basis in fact. Dr Walls's successor, R. L. Williams, refuted these comments in a subsequent letter to *The Times* dated 18th July, however, giving examples of good scientific practice in the Canon. He concluded that Dr Walls's comments concerning typewriters must have been "misreported", as much valuable work on typewriter comparison had been done while Walls was Director!

In another article in *Transactions*, which I was able to obtain, Miller discussed the drug habit of Sherlock Holmes, and was amongst the few writers to have suggested that Holmes did not use cocaine at all! Rather, Miller proposed that Holmes deliberately deceived Watson in this regard, and instead of cocaine used a belladonna alkaloid. There are a number of flaws in this argument, however; for instance, Miller's references were dated, and propagated long-dead myths about the cocaine user being criminally inspired, unreliable, unable to perform ordinary duties of life, morally debased, psychotic and/or neurotic. Because Holmes was none of these, Miller con-

cluded that he must not have used cocaine; as shall be seen later (1988 section), these characteristics are far from inevitable. Another outdated claim made was that "no one uses cocaine occasionally". Finally, Miller noted how the British Pharmacopoeia of 1885 did not list cocaine as suitable for injection; nevertheless, Freud injected it at this time, and Holmes was equally capable in the field of experimental pharmacology.

Other articles in *Transactions* were by Foster on Holmes and United States place names (of uncertain medical relevance!), and Beerman on Holmes and medical history. If any American readers have access to these references, I would be indebted if they could forward copies to me.

### 1979

The final publication concerning Holmes in *Transactions* was a letter by Grilly regarding Miller's article, probably covering similar ground to his 1980 article in the *SHJ* (see 1988 section). The only other article of significance about Holmes in 1979 was by Dirckx on Sherlock's relevance to the art of dermatologic diagnosis (see also 1977 and 1983 sections), such as his thoroughness, perception and discretion in obtaining a history, and his comment in Stud that the technique of investigation is one which can only be acquired by long and patient study: "Nor is life long enough to allow any mortal to attain the highest possible perfection in it". This echoes the aphorism of Hippocrates that: "Life is so short, and the art takes so long to learn". Nevertheless, the medic would disagree with Holmes's comment to Houn that: "There is nothing more stimulating than a case where everything goes against you"!

### 1980

Massey wrote a monograph on links between Dr Joseph Bell and Holmes (as mentioned earlier), and Brenner discussed the relationship between Holmes, Watson and neurology (see 1985, 1987 and 1991 sections). In addition, a series of ten articles by the late Sir Maurice Campbell were published in the *Guy's Hospital Gazette* between April 26th 1980 and September 26th 1981. Though not included in the Medicine database, this reference deserves mention as it is one of the most thorough and interesting discussions made of the medical content of the Canon, with an emphasis on teaching, and is thoroughly recommended to all medical readers (I would be happy to supply copies).

*To be continued in the next issue*

## References

- Accordo P. *Diagnosis and detection: the medical iconography of Sherlock Holmes*. Rutherford: Fairleigh Dickinson University Press, London: Associated University Presses, 1987.
- Ackerman A. B. Sherlock Holmesian dermatopathology. Parakeratosis as a diagnostic clue. *Am J Surg Pathol* 1978; **2**: 71-80.
- Anderson P. C. Murder in medical education. *JAMA* 1968; **204**: 119-23.
- Anonymous. A spot for Holmes? *Lancet* 1970; **1**: 824.
- Aronson M. E. Sherlock Holmes, father of forensic pathology. *Trans Stud Coll Physicians Phila* 1978; **45**: 258-61.
- Bates H. R. Sherlock Holmes and syphilis. Letter. *Can Med Assoc J* 1975; **113**: 815.
- Beck J. Luke May of Seattle — "America's Sherlock Holmes". *J Forensic Sci* 1992; **37**: 349-55.
- Beerman H. Sherlock Holmes and medical history. *Trans Stud Coll Physicians Phila* 1978; **45**: 243-8.
- Brenner R. P. Holmes, Watson and neurology. *J Clin Psychiatry* 1980; **41**: 202-5.
- Campbell M. Sherlock Holmes and Dr. Watson. A medical digression (Part I). *Guy's Hosp Gazette* 1980; **94**: 158-62.
- Cooperman E. M. Marfan's syndrome and Sherlock Holmes. Letter. *Can Med Assoc J* 1975; **112**: 423.
- Cooperman E. M. More on Sherlock Holmes. Letter. *Can Med Assoc J* 1975; **113**: 1024-5.
- Craig P. C. Memoirs of Sherlock Holmes through the eyes of an ophthalmologist. *Trans Pa Acad Ophthalmol Otolaryngol* 1972; **25**: 42-3.
- Curjel H. A Day in the life of young Stamford. *Sherlock Holmes J* 1974; **11**: 131-3.
- Curjel H. Mister or doctor? Letter. *Sherlock Holmes J* 1979; **14**: 66.
- Daschner F. D. The role of the infection control doctor. *J. Hosp Infect* 1988; **11** (Suppl A): 396-9.
- Dirckx J. H. Medicine and literature: Sherlock Holmes and the art of dermatologic diagnosis. *J. Dermatol Surg Oncol* 1979; **5**: 191-6.
- Doyle A. C. Introductory address at St Mary's Hospital on "The Romance of Medicine". *Lancet* 1910; **1**: 1066-8.
- Doyle A. C. *Memories and adventures*. London, England: Hodder & Stoughton, 1924.
- Elfenbaum B. A. If Sherlock Holmes had been a gerodontist. *Dent Dig* 1971; **77**: 592-7.
- Epstein L. H., Caggiola A. R., Perkins K. A., McKenzie S. J., Smith J. A. Conditioned tolerance to the heart rate effects of smoking. *Pharmacol Biochem Behav* 1991; **39**: 15-9.
- Foster R. United States place names and Sherlock Holmes. *Trans Stud Coll Physicians Phila* 1978; **45**: 249-51.
- Gerber S. M. *Chemistry and crime: from Sherlock Holmes to today's courtroom*. Washington, DC: American Chemical Society, 1983.
- Grilly D. M. A reply to Miller's "The Habit of Sherlock Holmes". Letter. *Trans Stud Coll Physicians Phila* 1979; **1**: 324-7.
- Horn B. Sherlock Holmes lasst grussen [Greetings from Sherlock Holmes]. *Schweiz Rundsch Med Prax* 1991; **80**: 1209-13.
- Kanterman C. B. Today's Sherlock Holmes — a dental professor. *TIC* 1983; **42**: 1-3.
- Key J. D. *Hench's triumph — a fixed point in a changing world: Dr. Phillip S. Hench's contributions to keeping the Holmes fires burning*. Rochester, Minn: Davies, 1981.
- Liebow E. *Dr. Joe Bell: model for Sherlock Holmes*. Bowling Green, Ohio: B. G. University Popular Press, 1982.
- Lister J. By the London post. Medical prospect — nurses' pay and nurses' dress — Sherlock Holmes returns. *N Engl J Med* 1968; **278**: 1440-2.
- Massey E. W. Joseph Bell, MD, FRCS — Mr. Sherlock Holmes? *South Med J* 1980; **73**: 1635-6.
- Miller W. H. The Habit of Sherlock Holmes. *Trans Stud Coll Physicians Phila* 1978; **45**: 252-7.
- Musto D. F. A study in cocaine. Sherlock Holmes and Sigmund Freud. *JAMA* 1968; **204**: 27-32.
- Musto D. F. Sherlock Holmes and heredity. "It is a hereditary matter...". *JAMA* 1966; **196**: 45-9.
- Nance T. Holmes hits target from wheelchair. *J. Rehabil* 1980; **46**: 58-94: 58-9.
- Nusynowitz M. L. Holmesian observation without deduction. *JAMA* 1969; **209**: 2056-7.
- Petrone F. R. (A Sherlock Holmes mystery): The case of the missing ladder. *J Contin Educ Nurs* 1978; **9**: 8-15.
- Portioli I, Valcavi R. Factitious phaeochromocytoma: a case for Sherlock Holmes. *Br Med J* 1981; **283**: 1660-1.
- Redmond D. A. Marfan's syndrome and Sherlock Holmes. Letter. *Can Med Assoc J*. 1975; **113**: 19.
- Rodin A. E., Key J. D. *Conan Doyle's tales of medical humanism and values*. Malabar, Florida: Robert Krieger, 1992.
- Rodin A. E., Key J. D. *Medical casebook of Doctor Arthur Conan Doyle: from practitioner to Sherlock Holmes and beyond*. Melbourne, Florida: Robert Krieger, 1984.
- Ronchese F. *Occupational marks*. New York: Grune and Stratton, 1948.
- Serup J. Contact thermography — towards the Sherlock Holmes magnifying glass for solving allergic and irritant patch test reactions? Letter. *Contact Dermatitis* 1987; **17**: 61-2.
- Shepherd M. *Sherlock Holmes and the case of Dr Freud*. London, United Kingdom: Tavistock Publications, 1985.
- Simpson K. *Sherlock Holmes on medicine and science*. New York: Magico Magazine, 1983.
- Smith E. B., Beerman H. Sherlock Holmes and dermatology. *Int J Dermatol* 1977; **16**: 433-8.
- Smithers D. W. *This idle trade — on doctors who were writers*. Dragonfly Press, 1990.
- Snow C. P. The classical detective story. In: *Parnassus Essays in Honour of Jacques Bargan*. Weiner D. B., Keylor W. R. (eds), New York: Harper & Row Publishers Inc, p 16, 1977.
- Vaisrub S. Holmes or spade? [editorial]. *JAMA* 1977; **238**: 2721-2.
- Van Liere E. J. *A doctor enjoys Sherlock Holmes*. New York: Vantage Press, 1959.
- Van Wallendaal L. R., Hastie R. Tracing the footsteps of Sherlock Holmes: cognitive representations of hypothesis testing. *Mem Cognit* 1990; **18**: 240-50.
- Ward J. Sherlock Holmes and forensic investigation. *Sherlock Holmes J* 1991; **20**: 90-2.
- Westmoreland B. F., Key J. D. Arthur Conan Doyle, Joseph Bell, and Sherlock Holmes. A neurologic connection. *Arch Neurol* 1991; **48**: 325-9.
- Zapata P. El atico cerebral de Sherlock Holmes y la educacion medica de pregrado [The brain attic of Sherlock Holmes and undergraduate medical education]. *Rev Med Chil* 1987; **115**: 992-4.