

APPROACHING THE USE OF HEDGES IN HISPANIC DENTAL CASE REPORTS¹

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Introduction

Case report (CR) is a well defined discursive genre; it is solidly established in the biomedical community. It consists of the description of: unknown, slightly frequent or atypical diseases; unknown, infrequent connections of diseases; new diagnostic procedures; or adverse unexpected effects of therapies that could be interesting for clinical, scientific and educational purposes (Jenicek, 2001, Bayne et al, 2003; Morales, en prensa-2).

In spite of being an important genre for the Dental community (Morales, en prensa-2), CR has not been studied in Spanish. Some studies have been published on criticism and hedging in Medicine: Adam-Smith (1984), Salager-Meyer et al. (1989, 1996), Salager-Meyer (1994), Salager-Meyer & Delfives (1998), Alcaraz- Ariza & Salager-Meyer (2002), Salager-Meyer & Alcaraz-Ariza (2003) y Oliver (2004).

Purpose

This paper describes and analyzes the use of hedging strategies in 40 dental CR published in Spanish in four Hispanic journals between 1999 and 2005. Based on Salager-Meyer et al. (1996), we define hedges as rhetoric, semantic and pragmatic devices used in the scientific communication among specialists for:

- a) Reducing levels of certainty of the truth of propositions;
- b) Expressing tentativeness and flexibility;
- c) Creating fuzziness and vagueness;
- c) Projecting modesty for his/her achievements and politeness with the community;
- d) Avoiding personal involvement¹.

¹ Oliver (2004) presents a literature review on hedges, which includes both Spanish and English academic discourse.

Methodology

This is a descriptive research. We identify the hedges used in each rhetorical section of CR by means of a contextual analysis of genre (Salager-Meyer's before mentioned documents). From the beginning of the research, we have had the assistance of specialist informants, dental professors and researchers, to guarantee validity and the reliability of results.

Corpus

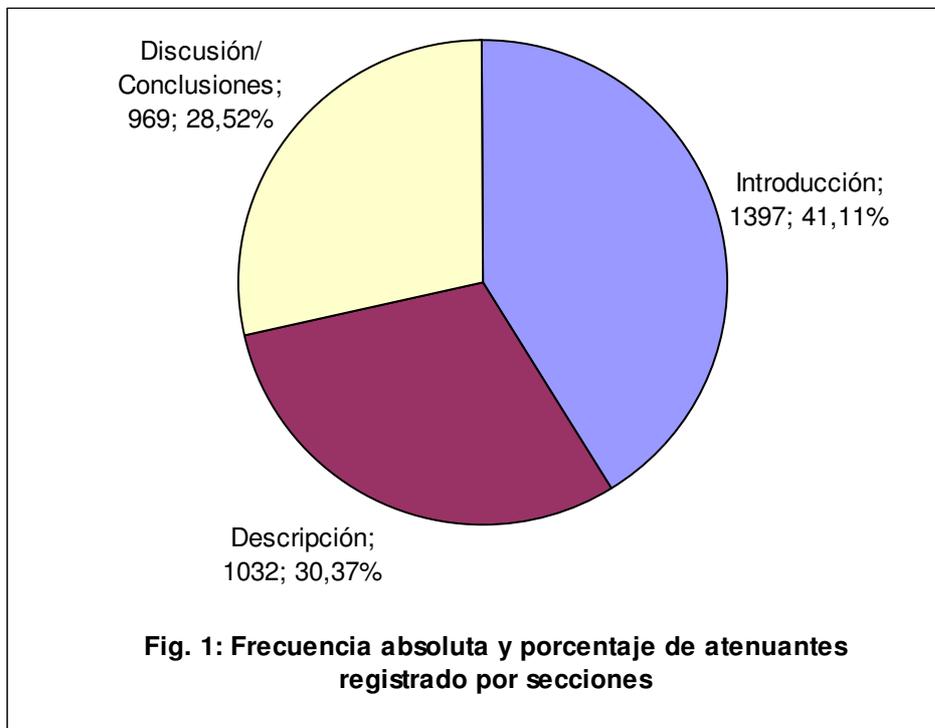
From 40 CR, we analyzed a corpus of 63.386 running words, taken from the rhetorical sections: *introduction, case presentation, and discussion/comment*. These articles were randomly selected from leading (internationally circulating) Spanish dental journals (10 from each journal)². We excluded from the analysis titles and references because we considered that these elements are not relevant for studying hedging devices; *resúmenes* and abstracts, since they are part of another research now in progress.

Taxonomy of hedges (Based on Salager-Meyer's before mentioned documents; and Morales et al., in press-1).

- **Impersonal constructions.** "Se" impersonal constructions, agentless constructions, agentless passives, 1st person plural (majestic or modesty). For example: *results suggest, it is known, it was done*.
- **Shields:** Epistemic modal verbs, epistemic verbs, possibility/probability adverbs and adjectives. For example: *may, to appear, to suggest, possible, probable*.
- **Approximators.** Adverbs (quantity, degree, frequency, time) and verbs expressing vagueness, imprecision, and variability. E.g.: *Approximately, somewhat, more or less, occasionally, to tend, to be used to*.
- **Compound hedges.** The combination or the juxtaposition of several hedges. E. g.: *Now it is known* (deictic and impersonal construction).
- **Time deictics.** Expressions that circumscribe the claims to a given moment, especially when the article was published. E.g.: *today, now*.

² Our dental specialist informants recommended us to consider just those journals indexed in Medline and PubMed, medical science database, Latindex, the most recognized directory in Latin America, and Scielo, Brazilian Scientific Electronic Library Online (URL <http://www.scielo.org>). We downloaded the full texts of CR from Scielo.

3. Results and discussion



When comparing the use of hedging devices between rhetorical sections, we did not find statistically significant differences ($p > 0.05$); we found one hedge every 24 words in the three sections (Table I). These results differ from Adam-Smith (1984), Salager-Meyer (1994), Salager-Meyer et al. (1989, 1996) and Oliver (1994). They found statistically significant differences in English and Spanish medical CR.

	Total de palabras	Promedio de palabras	%	Total de atenuantes	Promedio de atenuantes	%	Intervalo de ocurrencia de atenuantes
Introducción	24300	607.5	38.44	1397	34.9	41.1	17.4
Presentación del caso	22226	555.7	35.16	1032	25.8	30.4	21.5
Discussion/conclusión	16689	417.2	25.86	969	24.2	28.5	17,2
CC	63200	1580.4	100	3398	85	100	18.6

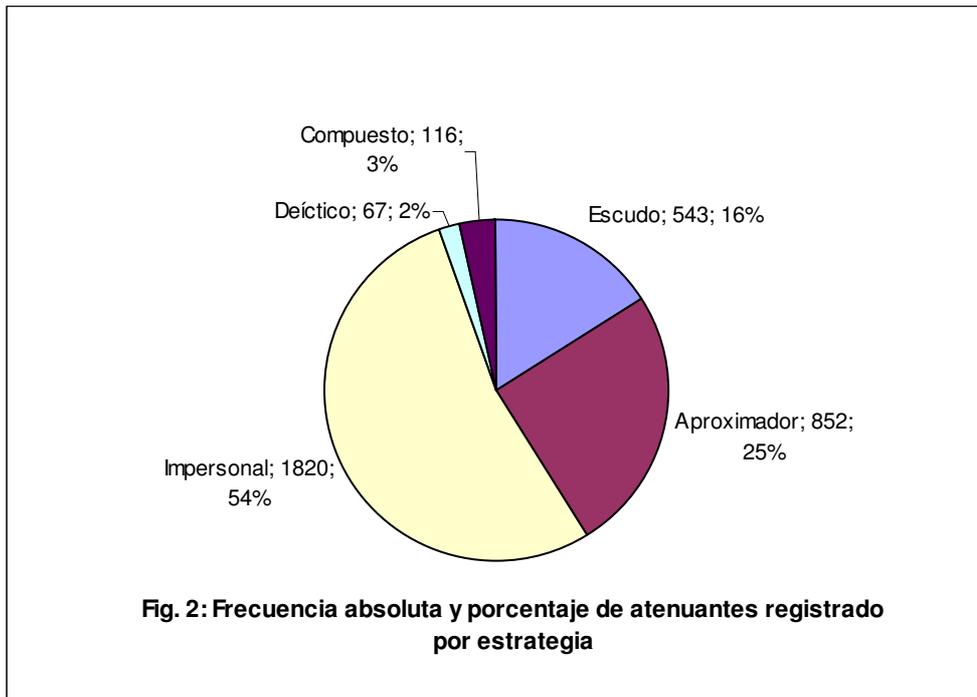
Table I: Frequency of occurrence of hedging devices in CR

The frequency of occurrence of hedges in *introduction* and *case presentation* is higher than what Adam-Smith (1984: 27-28) reported in English CR. He found that these sections had a lower frequency than the *discussion/comment* section.

Table II shows the frequency of use of Hedges. As can be seen, impersonal constructions, approximators and shields predominated. When comparing the frequencies of the five variables, we found statistically significant differences among their means ($p < 0.05$).

Estrategias de Atenuación	Escudos	Aproximadores	Impersonales	Deícticos	Compuestos
Promedio en la Introducción	7	11	15	1	2
Promedio en la Descripción del Caso	2	4	19	0	0
Promedio en la Discusión/conclusión	5	6	12	1	1
Total en el CC	14	21	46	2	3

Table II: Frequency of occurrence of the hedging devices



Impersonal constructions predominated, especially in the *case presentation* section. This coincides with Anspach (1988), Salager-Meyer et al. (1989, 1996), Hunter (1991) and Atkinson (1995: 94). They found that impersonality was associated with this rhetorical section, because it describes patients, diseases and procedures and it narrates their stories. Similar results were found by Luukka & Markkanen (1997) in oral and written academic discourse, and by Oliver (2004) in Spanish medical CR. (1) is a typical example.

(1) ...durante 7 días, se repitió al 10mo. día Rx de SPN y se ordenó ortopantograma para ...; se observó la misma radiopacidad, lo que evidenció que no era ectópico, ya que la dentición estaba completa. Se realizó proceder quirúrgico Caldwell-Luc del SM izquierdo, que corroboró que tenía un quiste dentígeno (CC-RCE-6).

On the other hand, approximators reported a high frequency because the narrative and descriptive sequences predominated (Prince et al., 1982; Salager-Meyer, 1989, 1994; Channell, 1994; Oliver, 2004). In the *introduction*, approximators are used to define diseases,

patients and procedures, to describe their distinctive features, to report their frequency of occurrence, prevalence, incidence, and to review, evaluate the literature (2).

(2) La lesión se observa con mayor frecuencia en pacientes ancianos con una predilección de edad entre 50 y 80 años. Se presenta mayormente en hombres, que en mujeres, probablemente porque estos están más expuestos al ambiente externo. 6 (CC-AOV-1).

According to Fletcher et al. (1998: 78), the high frequency of approximators reflects physicians' (and dentists') propensity to convert probabilities into words to avoid reporting precise claims when they are not sure of their accuracy (Channell, 1994). Moreover, too much precision, even in scientific discourse, could be found inappropriate.

Approximators are often used to highlight major themes, more precision for reporting important findings and more vagueness for those which the author considers unimportant or disagrees with. They are also used to give an impression of detachment of the author from the absolute truth of a proposition and are therefore a hedging device, used also to tone down claims so as to give an impression of modesty (Webber, 2005: 174).

Likewise, the use of this hedging device might reflect the fulfillment of the Grice's principle of cooperation (1975), particularly the maxim of quality: do not say what you know that is false or that for what you do not have sufficient evidence.

Besides, the frequency of occurrence of shields is lower than that found by Salager-Meyer (1994), Salager-Meyer et al. (1996) and Oliver (2004), due to descriptive - narrative and unargumentative predominance. These sequences do not support the use of shields (Salager-Meyer et to., 1996; Salager-Meyer and Alcaraz-Ariza, 2003). Shields were registered mainly in *introductions* and *discussions*, which are sections likely to argue and to speculate. Among shields, the epistemic modal verb "may (*poder*)" predominated (3). It is coherent with Salager-Meyer et al. (1989: 155-156) and Salager-Meyer (1994), who found similar results in English medical CR.

(3) Igualmente es necesaria la extracción cuidadosa del diente por luxación marginal, ya que la reabsorción radicular puede ser debida al trauma infligido al diente cuando se produce la extracción^{1**,8**,9**}. (CC-RCOE-2)

Compound hedges and time deictics reported low frequencies of use, which coincides with previous studies on hedging in Spanish dental review articles (Morales et al., 2007a, 2007b), but it differs from Salager-Meyer's (1994) results in English medical CR. Recurrently, deictics are combined with impersonal constructions, to emphasize the provisional nature of knowledge and to detach from the commitment of truth, as it is shown in examples (4) and (5). The use of compound permits to report different interpretations and applications as valid. They were found mainly in the *introduction* and *discussion*.

(4) Sin embargo, más recientemente se cree que la Osteopetrosis o enfermedad de Albers-Shönberg, pertenece a un grupo heterogéneo de enfermedades óseas metabólicas (CC-AOV-3).

(5) Hasta el momento sólo se han documentado seis casos de odontoma periférico en la literatura (5,6) (CC-MOPOyCB-8).

Conclusions

Dental case report writing seems to be influenced by the style of medical research articles. However, hedges are not subordinated, like in Medicine, to a given section; they are used in the whole article. It is a very impersonal genre, which is especially evident in the *case presentation*. Impersonality permits to project objectivity, and to promote the CR as scientific genre.

As a predominantly descriptive - narrative and unargumentative genre, it allows the use of approximators, but this limits the use of shields. The high frequency of approximators is coherence with biomedical tradition. Physicians and dentists are likely to express probabilities in words to accomplish different goals.

Results have pedagogical applications for teaching dental academic discourse. It is necessary to develop students' competence to produce and understand key genres of the discipline, their typical features. Hedging devices are among the most important.

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