

Revisión sistemática para estudio de casos

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Índice general

- 01** Que es una RS?
- 02** RS con RC?
- 03** Cual tipo de RS usar?
- 04** Porque seguimos publicando RC?
- 05** Para que usar RS para RC?
- 06** Como aplicar técnicas de RS para RC?

Puntos clave

1

Reportes de Caso (RC)

2

Revisiones Sistemáticas
(RS)

3

RS y RC?

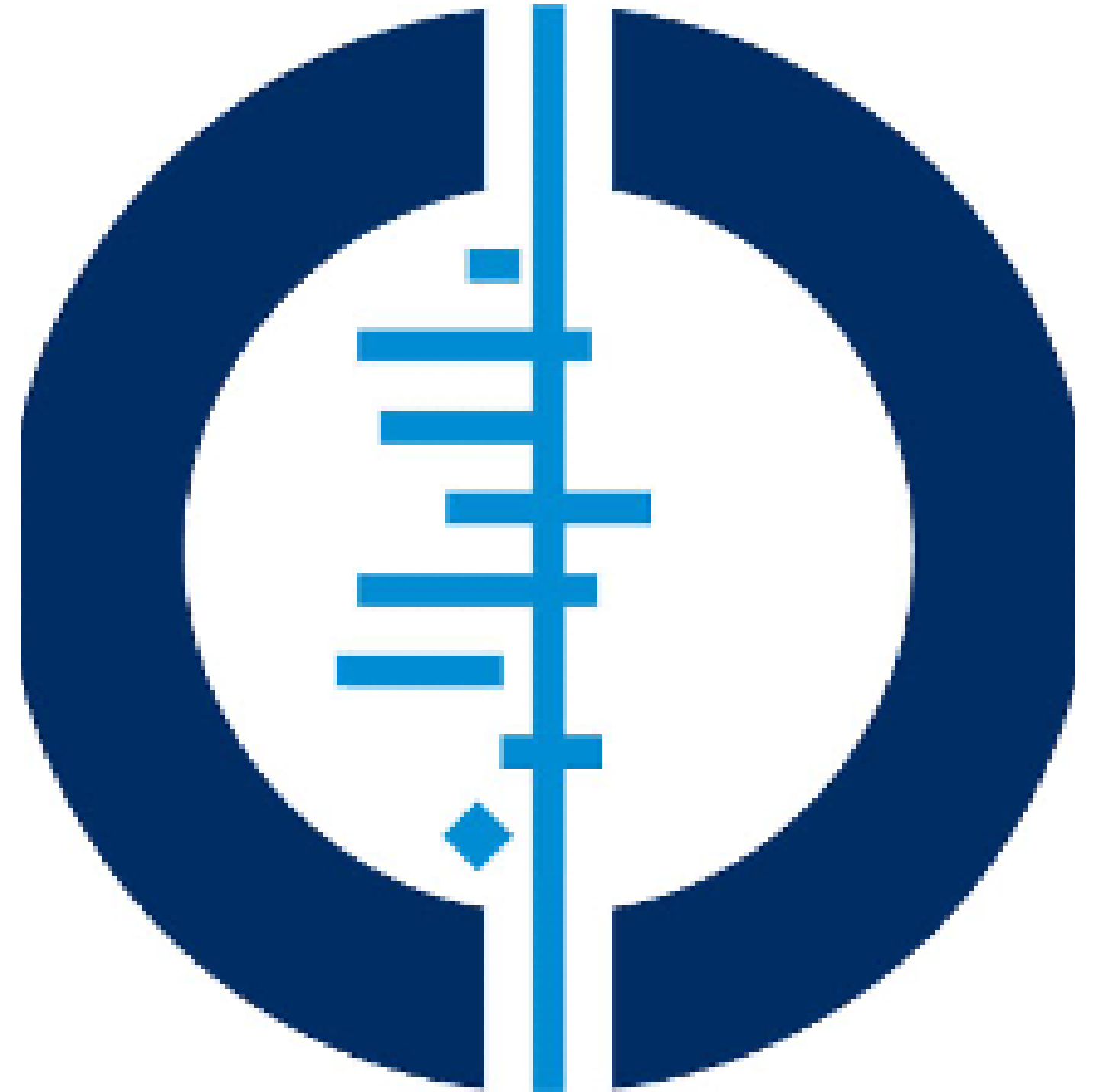
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RS para RC?

1. QUE ES UNA RS?

Que son las RS?

Son un **conjunto de metodologías** aplicadas para la búsqueda, selección, análisis y síntesis para responder a una pregunta con la mejor evidencia disponible.



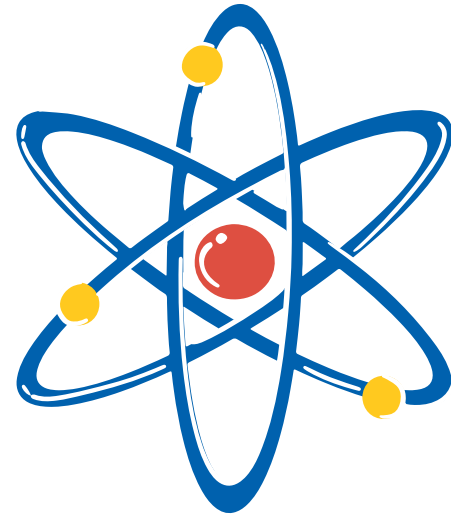
Differences Between Narrative and Systematic Reviews

Characteristic	Narrative Review	Systematic Review
Clinical question	Seldom reported, or addresses several general questions	Focused question specifying population, intervention or exposure, and outcome
Search for primary articles	Seldom reported; if reported, not comprehensive	Comprehensive search of several evidence sources
Selection of primary articles	Seldom reported; if reported, often biased sample of studies	Explicit inclusion and exclusion criteria for primary studies
Evaluation of quality of primary articles	Seldom reported; if reported, not usually systematic	Methodologic quality of primary articles is assessed
Summary of results of primary studies	Usually qualitative nonsystematic summary	Synthesis is systematic (qualitative or quantitative; if quantitative, this is often referred to as meta-analysis)

Reproduced from Cook et al.⁴

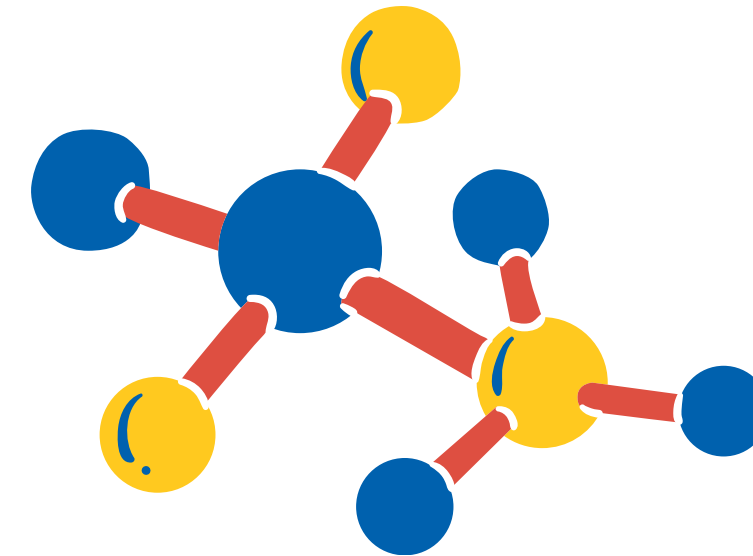
Gordon Guyatt, et. al. Users' Guides To The Medical Literature: A Manual For Evidence-based Clinical Practice. Second Edition.

RS = METANÁLISIS?



Tipo de investigación secundaria

1. PICO
2. Búsqueda y selección sistemática
3. Evaluación de calidad
4. Síntesis de resultados:
 - Cualitativo: por criterios
 - Cuantitativo: por parámetros ponderados (MA)



Técnica estadística que estima un parámetro resultante en base a datos ponderados

- saca "promedios" desde otros datos ponderados
- Caso hipotético
- n_1 : 30... $x = 55$ kg
 - n_2 : 60... $x = 75$ kg
 - n_1 : 120... $x = 80$ kg
 - X : 70 kg... MA: 76 kg

2. QUE Y PORQUE LOS RC?

Porque seguimos publicando RC?

Table 2 Role of case reports/series in the medical literature	
Roles	Examples
Describe a new phenotype or genotype of disease	The first case report of sickle cell disease. ¹
Recognise a known or common manifestation of a rare disease	Liver cirrhosis as a result of Sitosterolaemia. ³³
Recognise a rare manifestation of a known or common disease	Secretory diarrhoea and hypokalaemia in colonic pseudo-obstruction. ¹⁵
Describe a new pathogen (microbe, virus or environmental exposure)	Discovery of AIDS was an observation of a patient with immunodeficiency-related diseases who otherwise had no reason to be immunodeficient. ³⁴
Describe unknown adverse effect of an existing drug	Reye syndrome and aspirin in children. ³⁵ Thalidomide and malformation of the limbs in pregnant women. ³⁶
Describe a novel treatment for a known condition	Colchicine for the treatment of familial Mediterranean fever. ³⁷
Elucidate mechanisms of disease	Functional imaging of the brain during auditory hallucinations. ³⁸
To remind or educate	Case presentations in clinicopathological conferences for postgraduate education.
Quality improvement	‘Lesson of the week’ published in the <i>British Medical Journal</i> (do not make the same mistake as I did).

4. Describir un nuevo patógeno

CENTERS FOR DISEASE CONTROL

MNWR

MORBIDITY AND MORTALITY WEEKLY REPORT

June 5, 1981 / Vol. 30 / No. 21

Epidemiologic Notes and Reports

- 249 Dengue Type 4 Infections in U.S. Travelers to the Caribbean
- 250 *Pneumocystis* Pneumonia — Los Angeles
- Current Trends
- 252 Measles — United States, First 20 Weeks
- 253 Risk Factor-Prevalence Survey — Utah
- 259 Surveillance of Childhood Lead Poisoning — United States
- International Notes
- 261 Quarantine Measures

Pneumocystis Pneumonia — Los Angeles

In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

Patient 1: A previously healthy 33-year-old man developed *P. carinii* pneumonia and oral mucosal candidiasis in March 1981 after a 2-month history of fever associated with

La primera descripción de SIDA (1981)

Resumen: Un reporte de 5 casos de neumonía y sarcoma de Kaposi en hombres jóvenes homosexuales en Los Ángeles describió la aparición de un síndrome inmunodeficiente desconocido.

Importancia: Marcó el inicio de la investigación sobre el VIH/SIDA y cómo los reportes de casos pueden alertar sobre nuevas epidemias.

4. Nuevo evento adverso

Caso de la Talidomida (1961)

Resumen: A finales de los años 50, la talidomida se prescribía ampliamente como sedante y para las náuseas en el embarazo. En 1961, los médicos Widukind Lenz (Alemania) y William McBride (Australia) reportaron múltiples casos de recién nacidos con malformaciones graves de las extremidades (focomelia), asociadas a la exposición intrauterina al fármaco. Se estiman más de 10,000 casos en todo el mundo.

Importancia: Transformó la regulación de medicamentos y la farmacovigilancia, estableciendo la necesidad de pruebas rigurosas de seguridad (especialmente en embarazo) antes de la aprobación de fármacos. También marcó el inicio de los sistemas modernos de reporte de reacciones adversas.

THE LANCET

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LETTERS TO THE EDITOR · [Volume 279, Issue 7219](#), P45-46, January 06, 1962

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THALIDOMIDE AND CONGENITAL ABNORMALITIES

[W Lenz](#)^a · [R.A Pfeiffer](#)^b · [W Kosenow](#)^b · [D.J Hayman](#)

[Affiliations & Notes](#) ▾ [Article Info](#) ▾

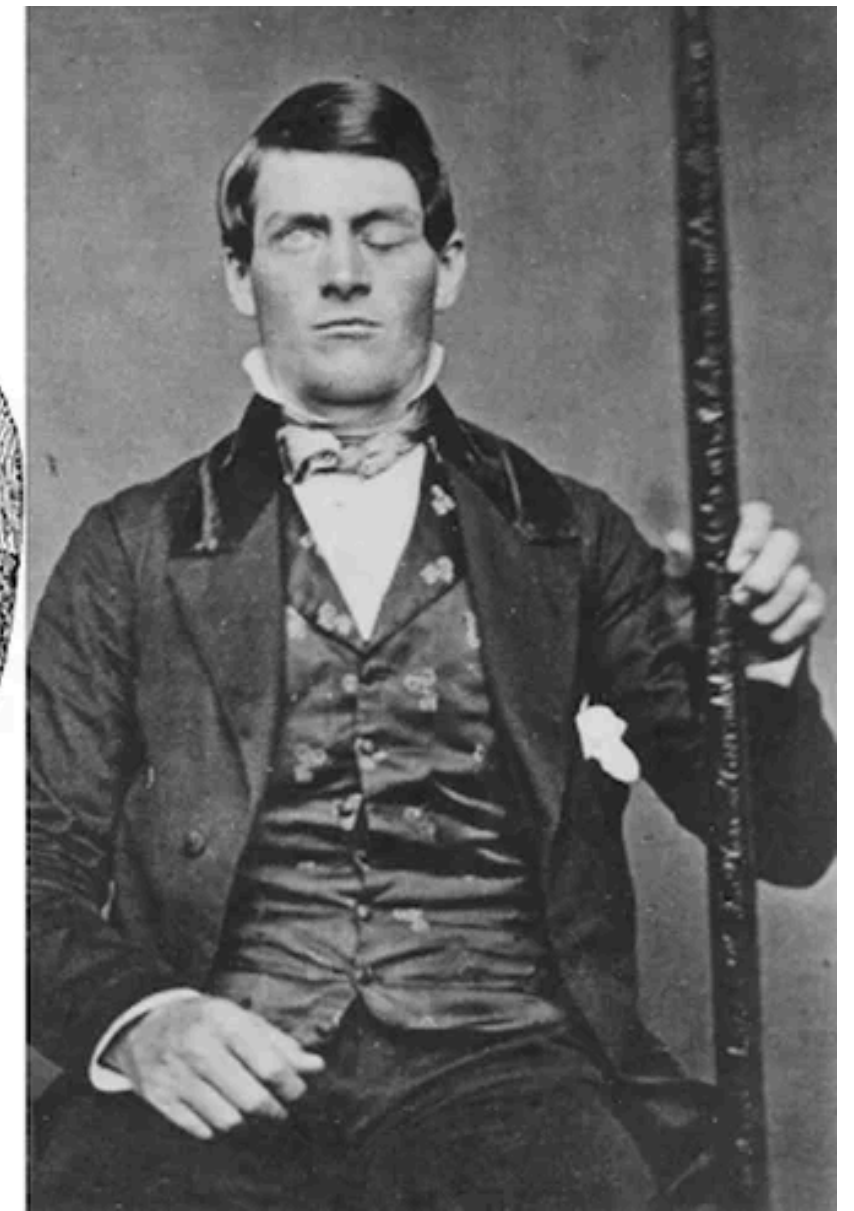
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7. Mecanismo de acción de una enfermedad

Paciente Phineas Gage (1823–1860)

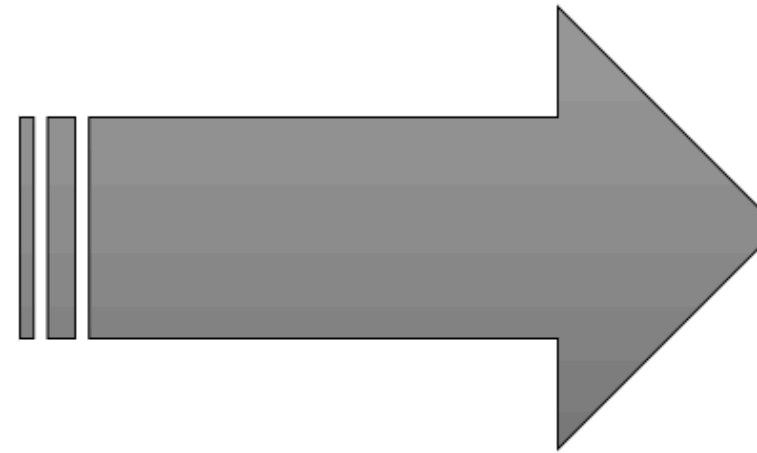
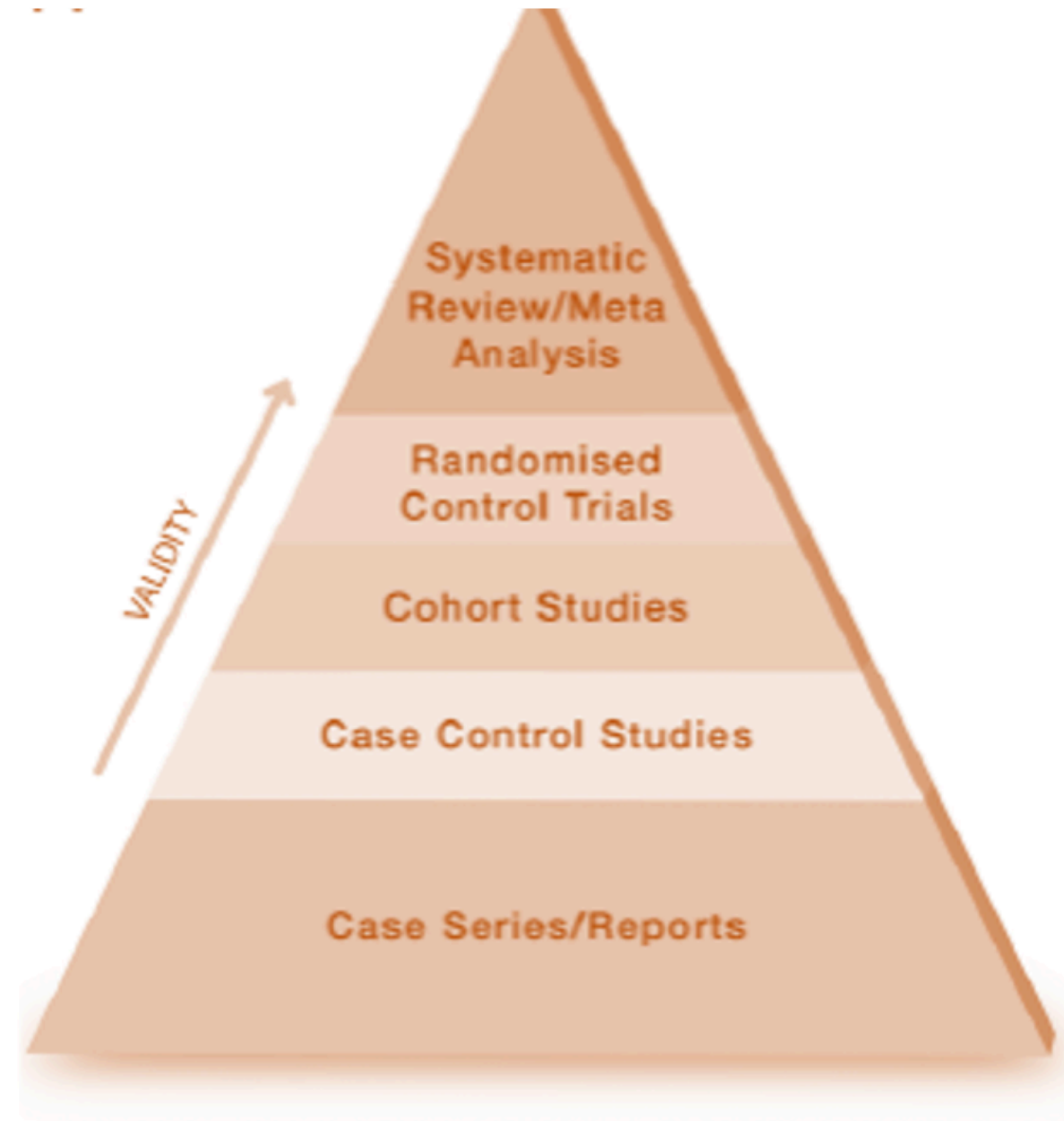
Resumen: Un accidente con una barra de hierro le atravesó el cráneo, dañando el lóbulo frontal. Sobrevivió, pero su personalidad cambió drásticamente: pasó de ser responsable y sociable a impulsivo y agresivo.

Importancia: Fue uno de los primeros casos que vinculó regiones cerebrales específicas con el comportamiento y la personalidad.



3. RS CON RC?

HACIA UNA NUEVA PIRAMIDE DE EVIDENCIA



Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. 2016;21(4):125-7

Los casos clínicos suelen ser una de las primeras fuentes de evidencia en el ejercicio de la medicina...

... aunque para la "Medicina Basada en la Evidencia" ocupen la base de la pirámide.



PIRÁMIDE REVISADA

Las RS y MA no siempre sintetizan el mismo tipo de estudios (diseño, datos, calidad), por tanto no debieran estar en la cúspide de la pirámide a priori...



...Las RS son/deberían ser el lente a través del cual los estudios primarios son presentados/vistos por quienes toman las decisiones.

4. CUAL TIPO DE RS USAR?

TIPOS DE RS

Table 1 Types of reviews

Review Type	Aim	Question Format	Question Example
Effectiveness	To evaluate the effectiveness of a certain treatment/practice in terms of its impact on outcomes	Population, Intervention, Comparator/s, Outcomes (PICO) [23]	What is the effectiveness of exercise for treating depression in adults compared to no treatment or a comparison treatment? [69]
Experiential (Qualitative)	To investigate the experience or meaningfulness of a particular phenomenon	Population, Phenomena of Interest, Context (PICo) [13]	What is the experience of undergoing high technology medical imaging (such as Magnetic Resonance Imaging) in adult patients in high income countries? [70]
Costs/Economic Evaluation	To determine the costs associated with a particular approach/treatment strategy, particularly in terms of cost effectiveness or benefit	Population, Intervention, Comparator/s, Outcomes, Context (PICOc) [14]	What is the cost effectiveness of self-monitoring of blood glucose in type 2 diabetes mellitus in high income countries? [71]
Prevalence and/or Incidence	To determine the prevalence and/or incidence of a certain condition	Condition, Context, Population (CoCoPop) [15]	What is the prevalence/incidence of claustrophobia and claustrophobic reactions in adult patients undergoing MRI? [72]
Diagnostic Test Accuracy	To determine how well a diagnostic test works in terms of its sensitivity and specificity for a particular diagnosis	Population, Index Test, Reference Test, Diagnosis of Interest (PIRD) [16]	What is the diagnostic test accuracy of nutritional tools (such as the Malnutrition Screening Tool) compared to the Patient Generated Subjective Global Assessment amongst patients with colorectal cancer to identify undernutrition? [73]
Etiology and/or Risk	To determine the association between particular exposures/risk factors and outcomes	Population, Exposure, Outcome (PEO) [17]	Are adults exposed to radon at risk for developing lung cancer? [74]
Expert opinion/policy	To review and synthesize current expert opinion, text or policy on a certain phenomena	Population, Intervention or Phenomena of Interest, Context (PICo) [18]	What are the policy strategies to reduce maternal mortality in pregnant and birthing women in Cambodia, Thailand, Malaysia and Sri Lanka? [75]
Psychometric	To evaluate the psychometric properties of a certain test, normally to determine how the reliability and validity of a particular test or assessment.	Construct of interest or the name of the measurement instrument(s), Population, Type of measurement instrument, Measurement properties [31, 32]	What is the reliability, validity, responsiveness and interpretability of methods (manual muscle testing, isokinetic dynamometry, hand held dynamometry) to assess muscle strength in adults? [76]
Prognostic	To determine the overall prognosis for a condition, the link between specific prognostic factors and an outcome and/or prognostic/prediction models and prognostic tests.	Population, Prognostic Factors (or models of interest), Outcome (PFO) [20, 34–36]	In adults with low back pain, what is the association between individual recovery expectations and disability outcomes? [77]
Methodology	To examine and investigate current research methods and potentially their impact on research quality.	Types of Studies, Types of Data, Types of Methods, Outcomes [39] (SDMO)	What is the effect of masked (blind) peer review for quantitative studies in terms of the study quality as reported in published reports? (question modified from Jefferson 2007) [40]

TIPOS DE RS

Review type	Aim	Question Format	Question Example
1. Effectiveness	To evaluate the effectiveness of a certain treatment/practice in terms of its impact on outcomes	Population, Intervention, Comparator(s), Outcomes	What is the effectiveness of exercise for treating depression in adults compared to no treatment or a comparison treatment?
2. Experiential	To investigate the experience or meaningfulness of a particular phenomenon	Population, Phenomena of interest, Context	What is the experience of undergoing high technology medical imaging in adult patients in high income countries ?
3. Cost/Economic	To determine the costs associated with a particular approach/treatment strategy, particularly in terms of costs effectiveness or benefit	Population, Intervention, Comparator(s), Outcomes, Context - PICOC	What is the cost effectiveness of self-monitoring of blood glucose in type 2 diabetes mellitus in high income countries?
4. Prevalence / incidence	To determine the prevalence and/or incidence of a certain condition	Condition, Context, Population (CoCoPop)	What is the prevalence/incidence of claustrophobia and claustrophobic reaction in adult patients undergoing MRI?

TIPOS DE RS

Review type	Aim	Question Format	Question Example
5. Diagnostic Test Accuracy	To determine how well a diagnostic test works in terms of its sensitivity and specificity for a particular diagnosis	Population, Index, Test, Reference test, Diagnosis of interest - PIRD	What is the diagnostic test accuracy of nutritional tools (Malnutrition Screening tool) compared to the Patient Generated Subjective Global Assessment amongst patients with colorectal cancer to identify undernutrition?
6. Etiology and/or Risk	To determine the association between particular exposures/risk factors and outcomes.	Population, Exposure Outcome - PEO	Are adults exposed to radon at risk for developing lung cancer?
7. Expert opinión / policy	To review and synthesize current expert opinion, text or policy on a certain phenomena	Population, Intervention or Phenomena of interest, Context . PICO	What are the policy strategies to reduce maternal mortality in pregnant and birthing women in Cambodia, Thailand, Malaysia and Sri Lanka?
8. Psychometric	To evaluate the psychometric properties of a certain test, normally to determine how the reliability and validity of a particular test or assessment	Construct of interest or the name of the measurement instrument(s), Population, type of measurement properties	What is the reliability, validity, responsiveness and interpretability of methods (instrument's name) to assess muscle strength in adults?

TIPOS DE RS

Review type	Aim	Question Format	Question Example
9. Prognostic	To determine the overall prognosis for a condition, the link between specific prognostic factors and an outcome and/or prognostic/prediction models and prognostic test	Population, Prognostic factors (or models of interest), Outcome - PFO	In adults with low back pain, what is the association between individual recovery expectations and disability outcomes?
10. Methodology	To examine and investigate current research methods and potentially their impact on research quality	Types of studies, types of Data, Types of methods, Outcomes - SDMO	What is the effect of masked (blind) peer review for quantitative studies in terms of the study quality as reported in published reports? ?

Cual se aplica en RS-RC?

Methodological quality and synthesis of case series and case reports

Mohammad Hassan Murad,¹ Shahnaz Sultan,² Samir Haffar,³ Fateh Bazerbachi⁴

Abstract

Case reports and case series are uncontrolled study designs known for increased risk of bias but have profoundly influenced the medical literature and continue to advance our knowledge. In this guide, we present a framework for appraisal, synthesis and application of evidence derived from case reports and case series. We propose a tool to evaluate the methodological quality of case reports and case series based on the domains of selection, ascertainment, causality and reporting and provide signalling questions to aid evidence-based practitioners and systematic reviewers in their assessment. We suggest using evidence derived from case reports and case series to inform decision-making when no other higher level of evidence is available.



Is Surfer's myelopathy an acute hyperextension-induced myelopathy? A systematic synthesis of case studies and proposed diagnostic criteria

Carlos Alva-Díaz^{1,2} · Ethel Rodríguez-López^{2,3,4} · Angélica López-Saavedra^{3,4} · Tatiana Metcalf^{1,4} · Cristian Morán-Mariños^{4,5} · Alba Navarro-Flores⁶ · Víctor Velásquez-Rimachi^{2,4} · Wilfor Aguirre-Quispe^{4,7} · Emad S. Shaikh⁸ · Nicanor Mori^{1,3} · Roberto Romero-Sanchez¹ · Kevin Pacheco-Barrios^{8,9}

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Abstract

Background Surfer's myelopathy is a rare complication of spinal hyperextension originally described in novice surfers. However, reports from patients practicing different activities had risen.

Aim To systematically synthesize the epidemiological and clinical evidence on acute hyperextension-induced myelopathy ("Surfer's myelopathy") and propose new diagnostic criteria.

Methods We systematically searched four databases for all observational and case studies on the topic. We performed a narrative synthesis to propose diagnostic criteria and tested the criteria retrospectively on the included cases. A case report is also presented.

Results Forty-two articles reporting 104 cases (median age 19 years, slightly male predominance) were included. All cases reported a nontraumatic hyperextension event (58% after surfing). All of the cases presented pain of hyperacute onset. The most frequent clinical feature was bladder or bowel dysfunction (84%). The thoracic region was the most frequently affected (87%) with longitudinal involvement until the conus (67%). At discharge or follow-up, 52% partially recovered. We propose five diagnostic criteria with three levels of certainty (definite, probable, and possible): (1) nontraumatic spine hyperextension activity (in individuals with no pre-existent spinal disease); (2) hyperacute onset (with acute pain onset); (3) spinal cord injury clinic (motor, sensory, or autonomic deficit); (4) MRI findings with central spinal cord abnormalities (multiple segments); and (5) no other alternative diagnosis. We identified 88% definite and 12% probable/possible cases.

Conclusion The acute hyperextension-induced myelopathy could occur not only during surfing but also during other activities. Therefore, increased awareness and education among sports communities and general physicians are needed.

Keywords Surfer's myelopathy · Spinal cord ischemia · Spinal cord injury

¿Existe algún estilo de pregunta estructurada?

En este caso se podría aplicar **PoCoChO**: una propuesta

- **P**: Populations,
- **Co**: Context,
- **Ch**: Clinical Characteristics
- **O**: Outcomes

Tipo de revisión	Objetivo	Formato de pregunta	Ejemplo
9. Case Report	Conocer la ocurrencia de eventos clínicos importantes de una (nueva) enfermedad: características, eventos adversos, desenlaces clínicos.	Population, Context, Clinical characteristics, Outcomes - PoCoChO	Is Surfer's myelopathy an acute hyperextension-induced myelopathy?

5. PARA QUE USAR RS PARA RC?

Que modelo se busca alcanzar?

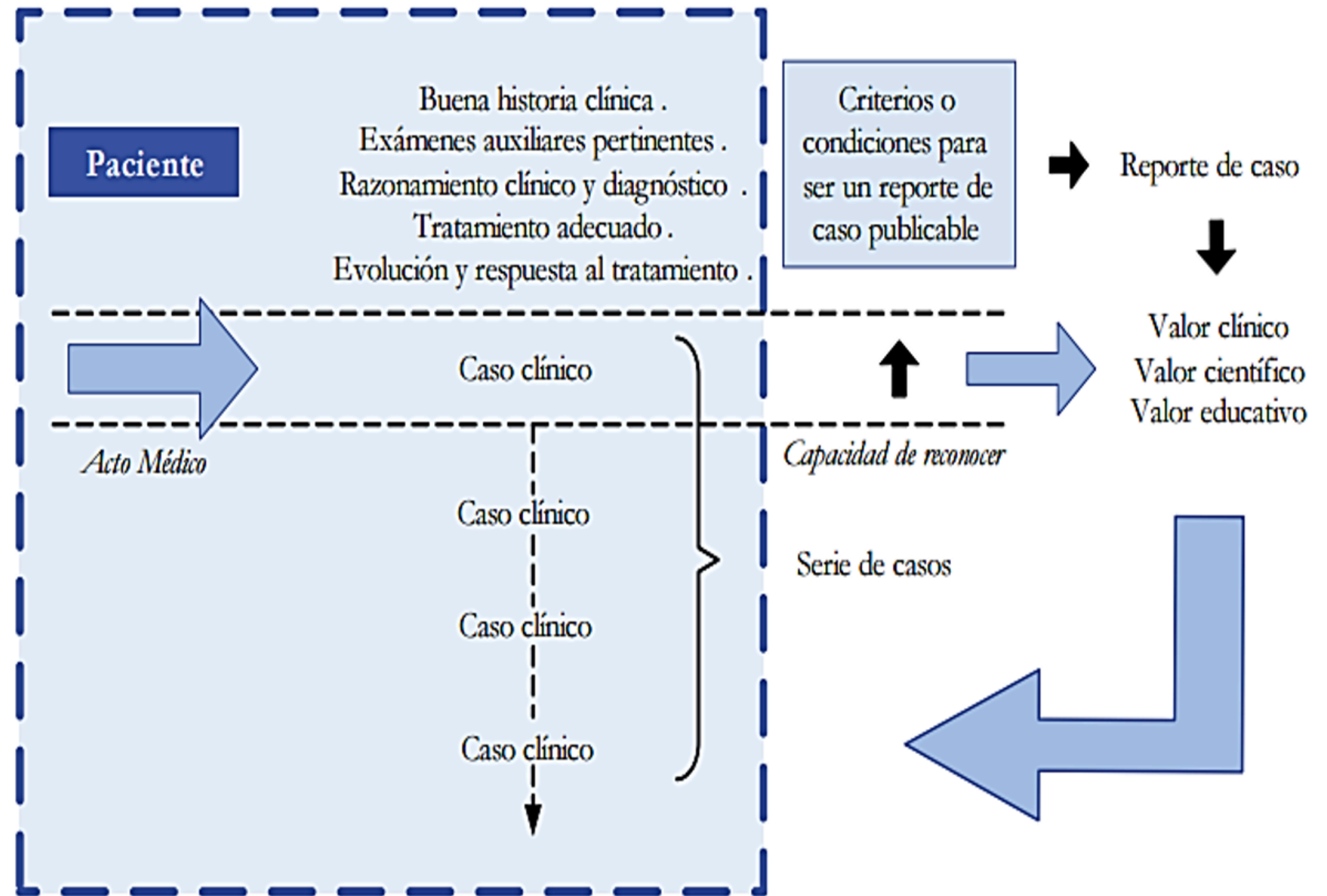
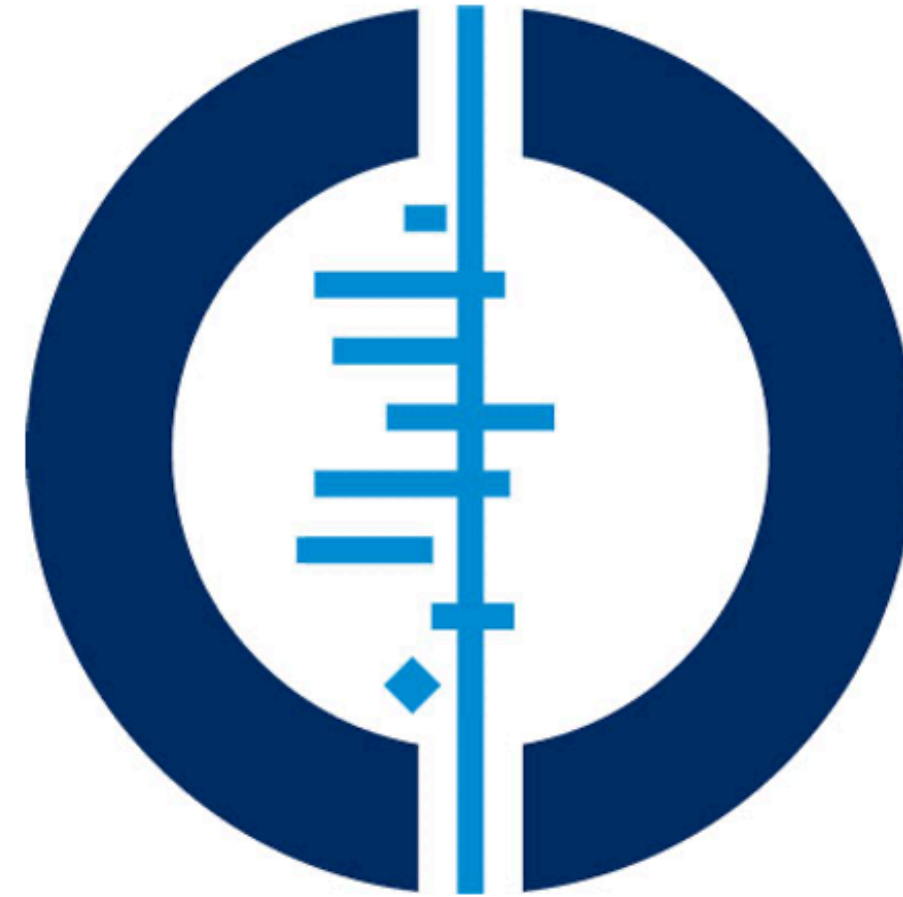
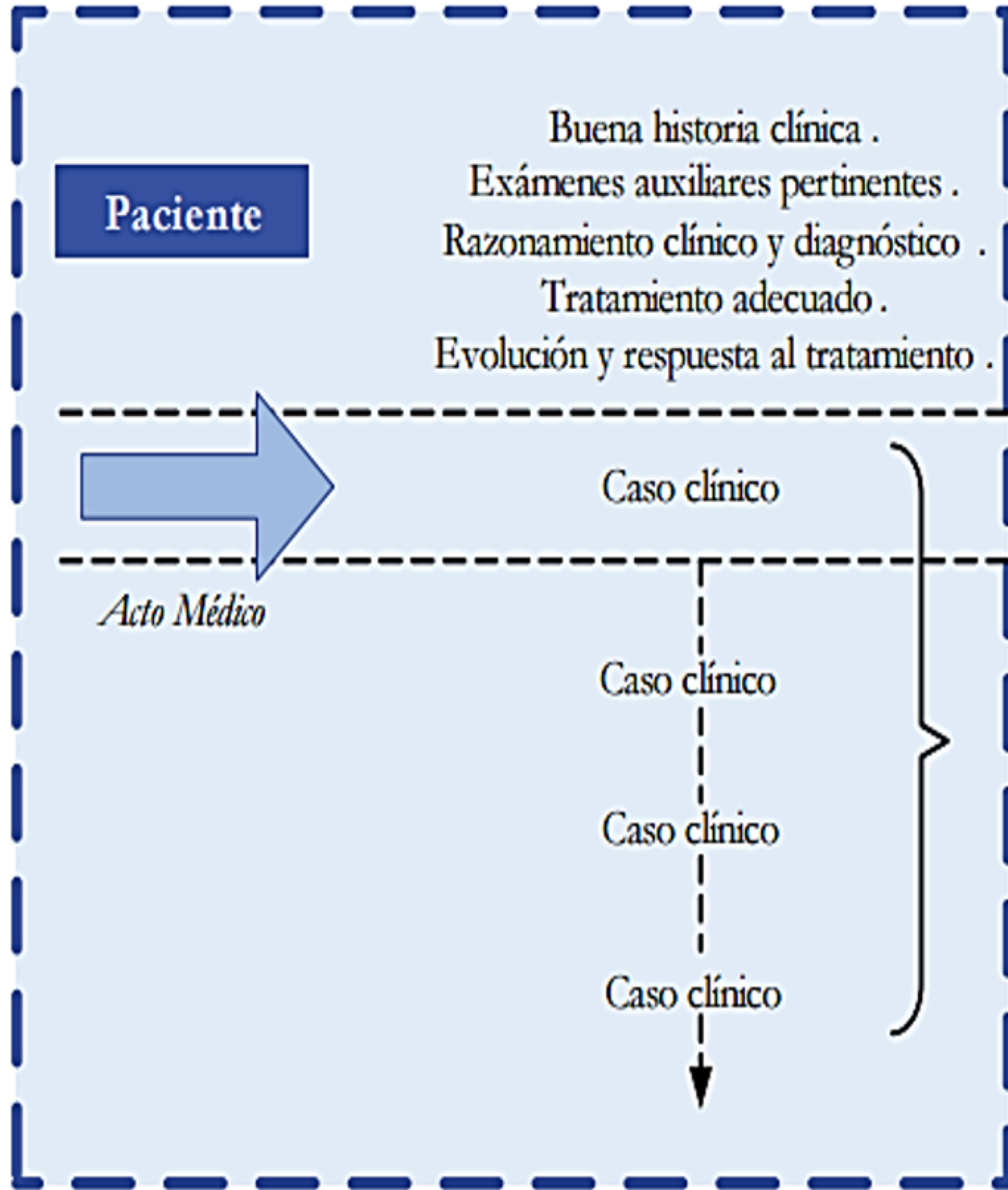


Gráfico 1. Importancia del reporte y serie de casos dentro del contexto clínico



**Serie de
casos**

6. COMO APLICAR TÉCNICAS DE RS PARA RC?

Pasos esenciales de una RS

1. Pregunta clínica estructurada

2. Búsqueda sistemática (y selección)

3. Evaluación de calidad

4. Síntesis (cuantitativa o cualitativa)


1. Pregunta clínica estructurada

Journal of Neurology
<https://doi.org/10.1007/s00415-021-10775-4>

REVIEW



Is Surfer's myelopathy an acute hyperextension-induced myelopathy? A systematic synthesis of case studies and proposed diagnostic criteria

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Systematic search

We conducted a comprehensive search in PubMed/Medline, Embase, Scopus, and Web of Science databases from inception to July 03, 2021. The search formula consisted of keywords for "surfer's myelopathy", "acute hyperextension myelopathy"; activities as "surf", "gymnastics", "sports"; and terms related to spinal injuries as "central cord syndrome", "paraparesis" or "myelopathy" (Supplementary Table 2). Additionally, we explored citations of previous reviews on the topic [3, 26] and included our case report.

2. Búsqueda sistemática (y selección)

Systematic search

We conducted a comprehensive search in PubMed/Medline, Embase, Scopus, and Web of Science databases from inception to July 03, 2021. The search formula consisted of keywords for "surfer's myelopathy", "acute hyperextension myelopathy"; activities as "surf", "gymnastics", "sports"; and terms related to spinal injuries as "central cord syndrome", "paraparesis" or "myelopathy" (Supplementary Table 2). Additionally, we explored citations of previous reviews on the topic [3, 26] and included our case report.

Study selection

The inclusion criteria were: (1) observational studies, case series or case reports of surfer's myelopathy with or without surfing and myelopathies due to hyperextension of acute onset in previously healthy individual; (2) reports that described socio-demographic and clinical data of the individual patients; (3) reports that described neuroimaging; and (4) full text available in English or Spanish languages.

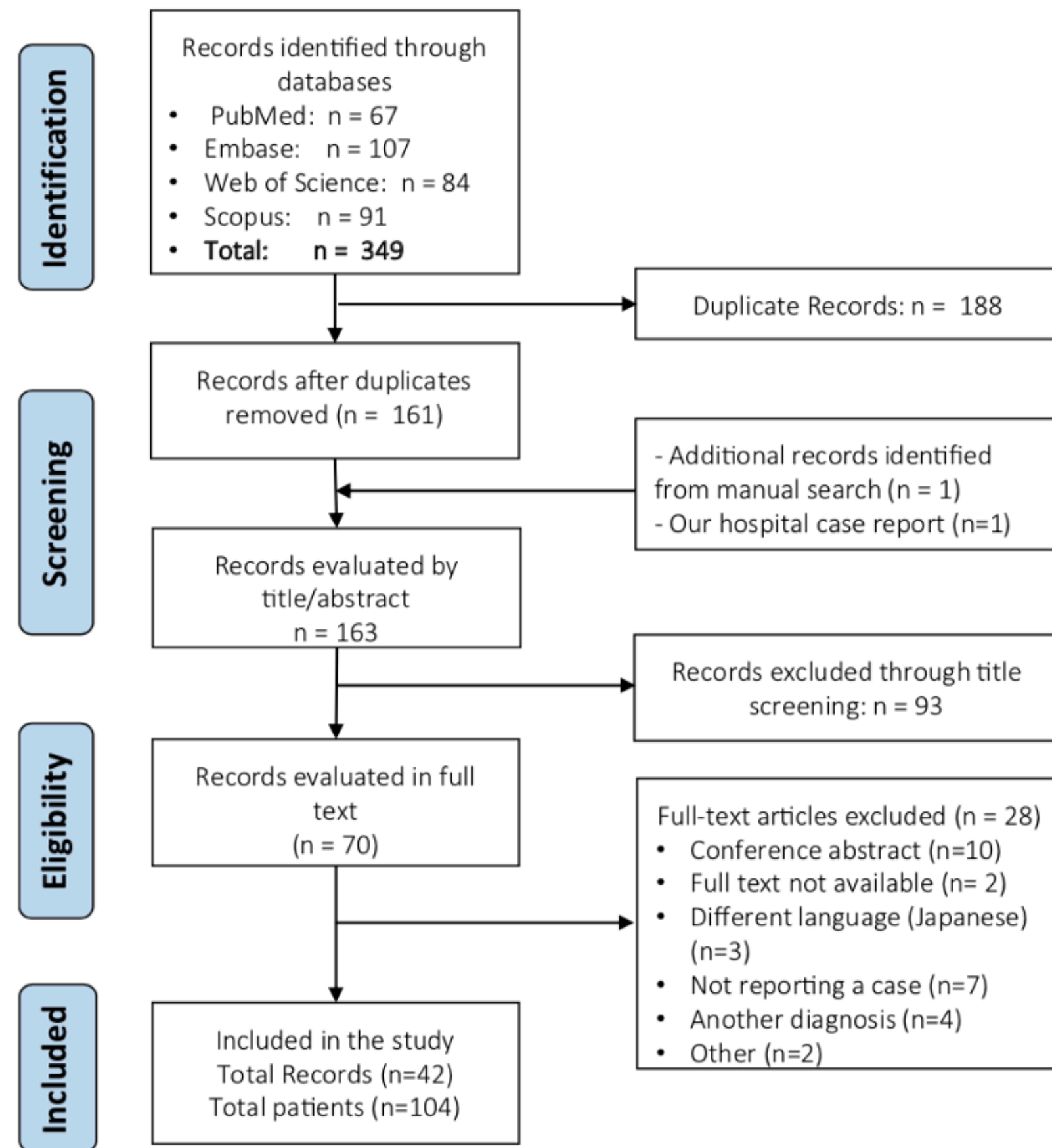


Fig. 2 PRISMA flowchart

3. Evaluación de calidad


Table 1 Tool for evaluating the methodological quality of case reports and case series

Domains	Leading explanatory questions
Selection	1. Does the patient(s) represent(s) the whole experience of the investigator (centre) or is the selection method unclear to the extent that other patients with similar presentation may not have been reported?
Ascertainment	2. Was the exposure adequately ascertained? 3. Was the outcome adequately ascertained?
Causality	4. Were other alternative causes that may explain the observation ruled out? 5. Was there a challenge/rechallenge phenomenon? 6. Was there a dose–response effect? 7. Was follow-up long enough for outcomes to occur?
Reporting	8. Is the case(s) described with sufficient details to allow other investigators to replicate the research or to allow practitioners make inferences related to their own practice?

Questions 4, 5 and 6 are mostly relevant to cases of adverse drug events.



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Emad S. Shaikh⁸ · Nicanor Mori^{1,3} · Roberto Romero-Sánchez¹ · Kevin Pacheco-Barrios^{8,9} 

Quality assessment

We used the tool proposed by Murad et al. [27]. This tool evaluated the methodological quality of case reports/series assessing eight questions about four domains. Since our systematic review does not focus on cases of adverse events, we selected only six questions for our assessment: (1) selection (a, Does the patient(s) represent(s) the whole experience of the investigator (center) or is the selection method unclear to the extent that other patients with similar presentation may not have been reported?); (2) ascertainment (b, Was the exposure adequately ascertained? c, Was the outcome adequately ascertained?); (3) causality (d, Were other alternative causes that may explain the observation ruled out? e, Was follow-up long enough for prognosis outcomes to occur? (we accepted a threshold of 6 months post-discharge as appropriate); and (4) reporting (f, Is the case(s) described with sufficient details to allow other investigators to replicate the research or to allow practitioners make inferences related to their own practice?). As suggested by the authors of the tool, we summed up the scores of the binary responses in an aggregate score (6 points at maximum). We defined equal or less than three as low-quality study.

4. Síntesis (cuantitativa o cualitativa)

Synthesis of case reports/series

A single patient case report does not allow the estimation of an effect size and would only provide descriptive or narrative results. Case series of more than one patient may allow narrative or quantitative synthesis.

Narrative synthesis

A systematic review of the cases with the rare syndrome of lipodystrophy was able to suggest core and supportive clinical features and narratively summarised data on available treatment approaches.¹⁷ Another systematic review of 172 cases of the infrequently encountered glycogenic hepatopathy was able to characterise for the first time patterns of liver enzymes and hepatic injury in this disease.¹⁸

Quantitative synthesis

Quantitative analysis of non-comparative series does not produce relative association measures such as ORs or relative risks but can provide estimates of prevalence or event rates in the form of a proportion (with associated precision). Proportions can be pooled using fixed or random effects models by means of the various available meta-analysis software. For example, a meta-analysis of case series of patients presenting with aortic transection showed that mortality was significantly lower in patients who underwent endovascular repair, followed by open repair and non-operative management (9%, 19% and 46%, respectively, $P < 0.01$).¹⁹



Data extraction and narrative synthesis

We performed a narrative approach for synthesizing the included studies. Narrative synthesis is an approach for systematic reviews and synthesis from multiple studies that depends primarily on using words and text to explain and summarize the findings. We used a four-stage process based on previous guidelines [28]: (1) developing a theory of how/why the association could be justified (pathophysiological and clinical plausibility); (2) developing a preliminary list of synthesis categories (contextual factors related to the exposure, time interval between exposure and event, AHIM clinical manifestations, neuroimaging and CSF findings, treatment response, and prognosis data); (3) exploring the relationships between and within included cases and present them by a summary table; and (4) proposing diagnosis criteria based on the most important and frequent characteristics identified in the synthesis categories. We defined a three-level certainty category (definite, probable, and possible) by consensus. Finally, we performed an exploratory retrospective validation of our diagnosis criteria calculating the frequency of our diagnosis criteria in the included cases.

Table 1 Patient characteristics reported in the literature

Characteristics	<i>n</i> (%)
Sex	
Male	54 (52%)
Female	50 (48%)
Age (median, range)	19 (3.5–56)
Activity	
Surf	60 (57.7%)
Other sports	8 (7.7%)
Activities of daily living	5 (4.8%)
Not specified	31 (29.8%)
Time onset from activity cessation	
During activity	30 (28.9%)
Around 1 h	27 (26%)
Two hours or more	9 (8.6%)
Not reported	38 (36.5%)
Clinical presentation ^a	
Paraparesis	25 (24%)
Paraplegia	60 (58%)
Tetraplegia	3 (3%)
Bladder/bowel dysfunction	91 (88%)
Back pain	87 (84%)
Paresthesia	28 (27%)
Neuroimaging signal hyperintensities ^a	
Cervical	5 (5%)
Thoracic	90 (87%)
Lumbar	73 (70%)
Thoracic to conus	70 (67%)
Not reported	11 (11%)
ASIA score at admission	
A	36 (34.6%)
B	19 (18.3%)
C	8 (7.7%)
D	7 (6.7%)
Not reported	34 (32.7%)
Treatment ^a	
Steroids	50 (48%)
Physical therapy	26 (25%)
Antiaggregant/anticoagulants	5 (5%)
Others	10 (10%)
Not reported	45 (43%)
Recovery at discharge	
No improvement	27 (26%)
Partial improvement	39 (38%)
Total recovery	15 (14%)
Not reported	23 (22%)

^a = more than one possibility was possible per patient

Síntesis cuantitativa y cualitativa

Criteria

1. Activity that caused nontraumatic hyperextension of the back or spine^a
2. Hyperacute onset:
Motor or sensory deficit in 4 h or less after hyperextension activity
3. Sign and symptoms of spinal cord injury:
Acute onset of pain (even before the deficit)
Motor, sensory, or autonomic neurological deficit of the region spinal affected^b
4. Magnetic resonance imaging involving the central cord with:
Hyperintense diffuse T2 lesion in the central spinal cord that may prolongate to the conus^c or infracton-like spinal or
"Pencil-like" or "owl/snake eye" longitudinally extensive hyperintense T2-weighted signal abnormalities
5. No other alternative diagnosis

Type of AHM

- Definite AHM (all criteria)
- Probable AHM (at least 1, 2, and 3)
- Possible AHM (at least 1 and 3)

Is Surfer's myelopathy an acute hyperextension-induced myelopathy? A systematic synthesis of case studies and proposed diagnostic criteria

¿Es la mielopatía del surfista una mielopatía aguda inducida por hiperextensión? Una revisión sistemática de reportes de casos y criterios de diagnóstico propuestos.



METODOLOGÍA



Revisión sistemática
con reporte de caso

Se incluyeron 42
artículos, 104 casos



Todos los artículos
publicados hasta julio
del 2021

CRITERIOS DE SELECCIÓN

- Serie de casos
- Reporte de casos
- Inglés y español



RESULTS



52%

48%



Actividades

En mayor %
SURFING

57.7%

Otros deportes (7.7%),
actividades diarias (4.8%)

Mediana

19 años (3.5-5.6)

Manifestaciones clínicas

58%

Hiperextensión no traumática
después de surfear

100%

Dolor hiperagudo

84%

Disfunción vesical o intestinal

87%

**Examen de imágenes con región
torácica afectada**

La mielopatía por hiperextensión no
solo ocurre por practicar surf, sino
otros deportes o actividades en casa.
No existe un consenso diagnóstico.

CRITERIOS DIAGNÓSTICOS PROPUESTOS

- 1 Hiperextensión de no traumática de la columna
(sin enfermedad previa)
- 2 Inicio hiperagudo (con inicio de dolor
hiperagudo)
- 3 Lesión clínica de la médula espinal (déficit
motor, sensorial o autonómico)
- 4 Hallazgo en resonancia magnética con anomalías
centrales en múltiples segmentos de la médula espinal
- 5 No hay otro diagnóstico

Q1

Journal of
Neurology

Cita: Alva-Díaz C, Rodríguez-López E, López-Saavedra A, Metcalf T, Morán-Mariños C, Navarro-Flores A, Velásquez-Rimachi V, Aguirre-Quipe W, Shaikh ES, Mori N, Romero-Sanchez R, Pacheco-Barrios K. Is Surfer's myelopathy an acute hyperextension-induced myelopathy? A systematic synthesis of case studies and proposed diagnostic criteria. J Neurol. 2021 Sep 3. doi: 10.1007/s00415-021-10775-4. Epub ahead of print. PMID: 34477933.

CONCLUSION

La mielopatía aguda inducida por hiperextensión podría ocurrir no solo durante el surf sino también durante otras actividades. Por lo tanto, se necesita una mayor conciencia y educación entre las comunidades deportivas y los médicos generales.



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Conclusiones

1.

Reportes de caso

Son y siguen siendo un tipo de evidencia a utilizar

2.

Revisiones Sistemáticas

Son un conjunto sistemático de metodologías para la síntesis de evidencias

3.

RS para RC

Es posible aplicar técnicas de RS para potenciar el estudio de RC y sus aplicaciones

4.

Que técnicas de síntesis

Tanto cuantitativas y cualitativas.
Sin embargo las técnicas cualitativas pueden potenciar el desarrollo de hipótesis

5.

Para que utilizar RS de RC

Buscar acercarse a modelos de tipo serie de casos

6.

Cuando usarlos

Para resolver preguntas de ocurrencias:

1. Criterios diagnósticos
2. Eventos adversos

¿Preguntas...?

¡Gracias!

¿Tienes alguna pregunta?

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