Medical Case Reports: how the knowledge captured in individual case reports can inform evidence-based practice and clinical education



Michael Kidd Editor-in-Chief Journal of Medical Case Reports <u>www.jmedicalcasereports.com</u>

#### Are case reports compatible with Evidence-Based Medicine?



# Why a journal of medical case reports?

- "The best teaching of medicine is that taught by the patient" – Osler
- Detailed information about an individual
- Neglected area for publication
- Impact on Impact Factors
- Potential to contribute to research and change clinical practice

### Case reports and Evidence Based Health Care

- Case reports offer information that large scale studies cannot
- Previously unreported reactions to new medications
- Rich source of hypothesis
- Use to inform research as part of a comprehensive database with other case reports
- Teaching clinical medicine
- Resource of clinical images and teaching materials

## What are we looking for?

Original case reports that expand the field of medical knowledge:

- 1. Unreported or unusual side effects or adverse interactions involving medications
- 2. Unexpected or unusual presentations of a disease
- 3. New associations or variations in disease processes
- 4. Presentations, diagnoses and/or management of new and emerging diseases
- 5. An unexpected association between diseases or symptoms
- 6. An unexpected event in the course of observing or treating a patient
- 7. Findings that shed new light on the possible pathogenesis of a disease or an adverse effect

### Progress to date

- Editorial board established:
  75 members from 21 nations
- Open peer review process
- In house editorial team
- PubMed acceptance
- Journal launch February 2007
- Database of case reports under development

#### Stats

- Submissions received: 582
- Manuscripts published: 122
- 40% non-English speaking countries
- 25% low to middle income countries

### Adverse interactions

- A fatal case of bupropion (Zyban) hepatotoxicity Extensive psoriasis induced by pegylated interferon
- Fatal miliary Coccidioidomycosis with infliximab therapy
- Anaphylactic reaction associated with Ranitidine in a person with acute pancreatitis
- Ventricular tachycardia after administration of sildenafil citrate
- Acute pancreatitis related to therapeutic dosing with colchicine
- Fluoroquinolone-associated tendinopathy

### Case reports in clinical education

 One key aim is to provide an opportunity for medical students and recent medical graduates to start researching and writing up their own clinical observations about individual patients as part of their training in evidence-based practice

#### Most viewed articles

 Oedema of the metatarsal heads II-IV and forefoot pain as an unusual manifestation of Lyme disease: a case report
Stefan Endres, Markus Quante Journal of Medical Case Reports 2007, 1:44 (9 July 2007)

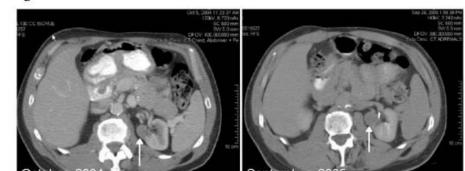


#### Acute compartment syndrome of the hand in Henoch-Schonlein Purpura Guntur E Luis, Eng-Seng Ng Journal of Medical Case Reports 2007, 1:6 (2 March 2007)



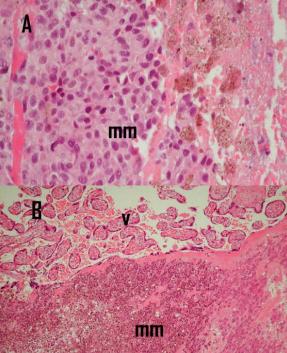
 A possible new syndrome with growthhormone secreting pituitary adenoma, colonic polyposis, lipomatosis, lentigines and renal carcinoma in association with familial testicular germ cell malignancy: A case report **Phuong L Mai et al**, Journal of Medical Case Reports 2007, 1:9 (28 March 2007)





 <u>Atrial and placental melanoma</u> <u>metastasis: a case report and literature</u> <u>review</u>

Pradeep Lakshminarayana, Sarah Danson, Kim Suvarna, Barry Hancock Journal of Medical Case Reports 2007, 1:21 (14 May 2007)



 <u>A case of penile fracture with complete</u> <u>urethral disruption during sexual</u> <u>intercourse: a case report</u>
Klemen Jagodič, Marko Erklavec, Igor Bizjak, Sandi Poteko, Helena Korošec Jagodič Journal of Medical Case Reports 2007,

1:14 (2 May 2007)



#### Our database

- All cases are aggregated into a structured database which makes it possible to search for patterns of drug reactions, or demographic data and disease information, across multiple case reports.
- The strength of this resource will increase with the increase in the number of case reports.



DATABASE OF MEDICAL CASE REPORTS

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#### Congenital malaria with atypical presentation: A case report from low transmission area in India

#### **Case Summary**

We describe an exploratory, data-oriented approach for identifying candidates for differential gene expression in cDNA microarray experiments in terms of  $\alpha$ -outliers and outlier regions, using simultaneous tolerance intervals relative to the line of equivalence (Cy5 = Cy3). We demonstrate the improved performance of our approach over existing single-slide methods using public datasets and simulation studies.

#### **Case Overview**

		Related cases
Subject area:	Infectious diseases	1. Retroperitoneal haemorrhage in renal angiomyolipoma causing hepatic functional decompasation: a case report 2. Bowel associated dermatosis- arthritis syndrome: a case report
Type of case report:	Unexpected or unusual presentations of a disease	
Date of presentation:	Unknown	
Outcome:	Complete resolution	
Patient Demographics		3. An unusual presentation of brucellosis,
Age of patient at diagnosis:	Infancy (1 month to 1 year)	involving multiple organs systems, with low agglutinating tilters: a case report 4. Hepatotoxicity induced by horse ATG and reversed by rabbit ATG: a case report
Sex of patient:	Unknown	
Country patient is located:	India	
Ethnic origin of patient:	South Africa	
Presentation and investigation		5. Cystic fibrosis and renal disease: a case report