

Descriptive Observational Studies

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Descriptive Observational Studies



- Characterize disease occurrence by **time**, **place** and **person**.
- Attempt to answer questions '**Who**', '**Where**', '**What**' and '**When**'?
- **Generate** testable **hypothesis** as to the cause of disease, that can be tested in “analytical” studies

Case Report (Case Study)



- Careful and detailed report of the profile of a **SINGLE** patient by one or more clinicians
- Condition is **unusual** medical occurrences
- Can **generate hypothesis**, provide clues in identification of a new disease or adverse effects of exposures
 - *(E.g. It was a single case report that formulated the hypothesis of oral contraceptive use increases venous thromboembolism)*
- It is made using; simple history, physical examination and Lab./ radiological tests

Case Report (Case Study)

BMC Women's Health



Case report

Open Access

Acute pancreatitis following medical abortion: Case report

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Case presentation: We report the case of a 34-year-old woman who underwent medical abortion with mifepristone and gemeprost and received codeine as pain-relief during the induction of abortion. She developed a severe acute necrotizing pancreatitis which required 14 days of intensive care. Other possible etiological factors, i.e. gallstone, alcohol intake and hyperlipidemia, were excluded.

Conclusions: The reported case of acute pancreatitis was most likely drug-induced.

Case Series Studies



- Description of clinical/epidemiologic characteristics of a **number of patients** (usually 5-12) with a given disease having similar diagnosis
- Collection of individual case reports occurring within a fairly **short period** of time
- Used as an early means to identify the beginning or presence of an **epidemic**, generate **hypothesis** and gives information about **natural history** of disease

Case Series Studies

Case Report

A Case Series of Gastrointestinal Tuberculosis in Renal Transplant Patients

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2. Case 1

A 53-year-old man with end-stage renal failure (ESRD) of unknown etiology was on hemodialysis (HD) since 1999. He underwent a first RT in 2000, with cyclosporine (CyA), mycophenolate mofetil (MMF), and prednisolone as immunosuppressive therapy. Renal graft was lost after 3 days, due to renal artery thrombosis. Second deceased

3. Case 2

A 53-year-old woman, inactive carrier of hepatitis B and ESRD secondary to membranoproliferative glomerulonephritis, was on HD since 1984. She underwent a deceased kidney transplantation in 2007, (CMV donor+/recipient+). Initial immunosuppressive therapy was daclizumab, prednisolone, MMF, and TAC. There were no delayed graft function, acute rejection episodes, and surgical or infectious complications and renal allograft function remained normal.

Three years after RT, in February 2010, an episode of intestinal obstruction was documented and assumed as secondary to adhesions. Laparotomy was performed and showed few small bowel and colon loops with a whitish

Uses of Case Report and Case Series Studies



- Identifying the **potential health problem** (e.g. acute outbreaks)
- Can be valuable **early evidence for associations** between exposures and diseases which can be studied in more detail
- Recognition of **new diseases**
- Constructing the **natural history** of a disease
- Stimulate **research** interest in an area.

Case Report and Case Series Studies



Limitations

- Limited amount of information
- No appropriate comparison group
- Based on the experience of one person so
Can't be used to test for presence of a valid
statistical association
- Little evidence of causality

Ecological Studies

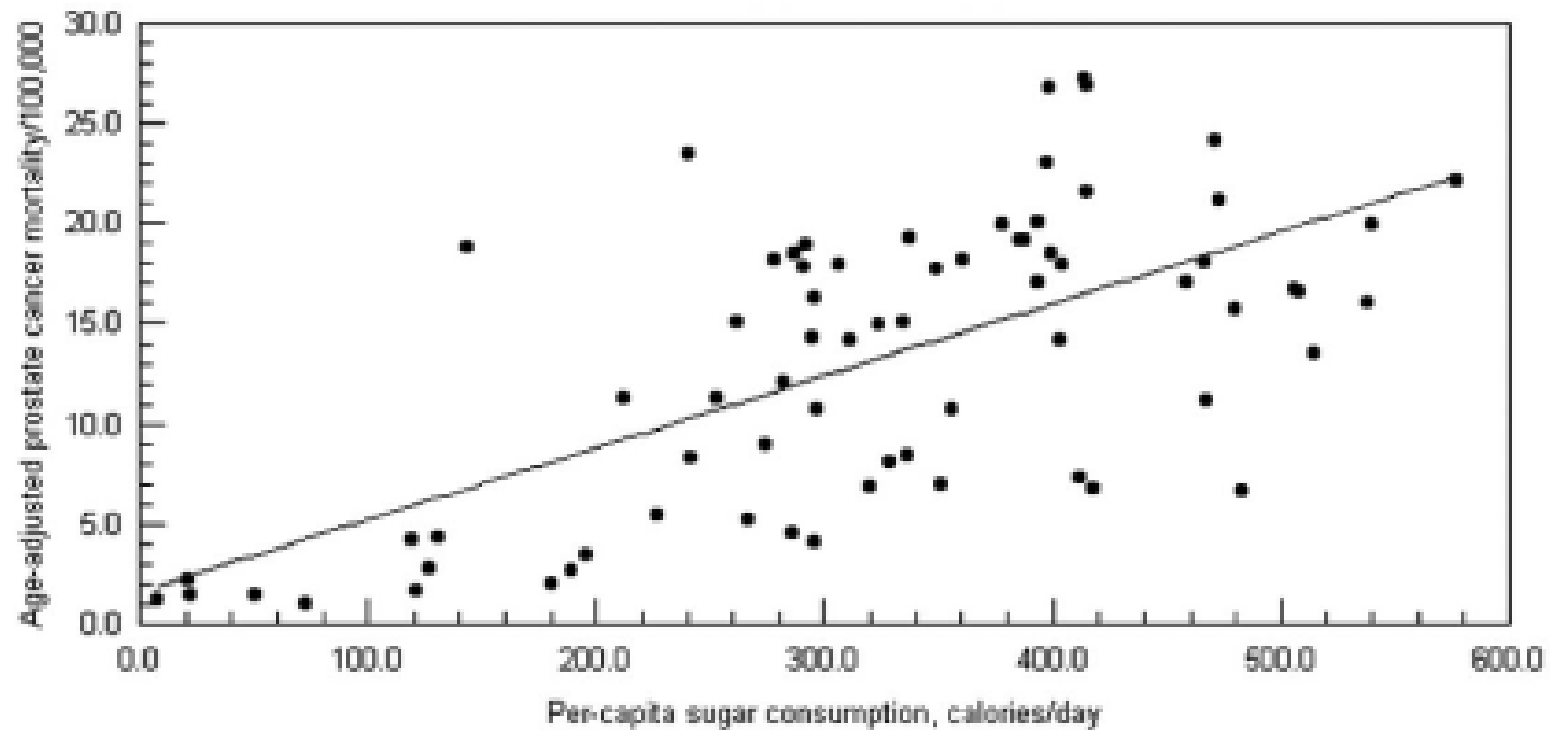


Fig. 1. Prostate cancer mortality versus sugar consumption in 71 countries.

- An Observational study in which at least one variable, either an exposure or the outcome, is measured **at the group** (not individual) level.
- The occurrence of disease is compared between groups that have different levels of an exposure
- Easy to do difficult to interpret.

Examples

- The association between sunlight exposure at specific geographic location and development of skin cancer.

Disadvantage:

- The association between variables at group level might not represent the association at the individual level.