

Use of Health Care Administrative Databases to Estimate Incidence of Foot Complications in Diabetes Patients

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Objectives

Foot complications (e.g. infections, abscesses) are common in patients with diabetes mellitus (DM) and are associated with high morbidity and risk of lower extremity amputation. The objective of this analysis was to estimate the incidence of foot complications in patients with a diabetes diagnosis.

Methods

DM population in Lombardy Region (Italy) was identified through a data warehouse (DENALI), matching with probabilistic record linkage demographic, clinical and economic data of different Healthcare Administrative databases. We selected individuals with diabetes diagnosis prior to December 31, 2000 (hospital discharge with an ICD-9 CM code 250.XX, and/or two consecutive prescriptions of drugs for diabetes (ATC code A10XXXX) within one year, and/or an exemption from co-payment health care costs specific for DM). From this cohort, we detected patients requiring at least one hospitalization for toe and foot complications (e.g. ICD-9 CM 682.7, 'Other cellulitis and abscess-Foot') in the next 9 years of follow-up.

Results

Over the follow-up period, 5,096 of the 1,322,686 hospitalizations of DM patients (0.39%), were attributable to foot and toe complications. We individuated 3,404 patients (1.09% of the overall diabetes population; N=312,223) with at least one hospitalization for foot and toe complications (males: 64.72%, mean age: 64.64 years). The most frequent conditions were lower limb amputations (ICD-9 CM: V497.X; N=1,729 patients), cellulitis and abscesses of foot (ICD-9 CM: 682.7; N=976 patients) and cellulitis and abscesses of toe (ICD-9 CM: 681.1; N=783 patients). Considering the overall observation period (831 million days, 7.29 years per patient), incidence rates were 0.76, 0.43 and 0.35 events per 1,000 pts-year, for amputations, cellulitis or abscesses of the foot, cellulitis or abscesses of the toe, respectively.

Conclusions

Administrative database analysis is an efficient tool to track foot and toe serious complications, as only events requiring hospitalization can be detected with this methodology.