

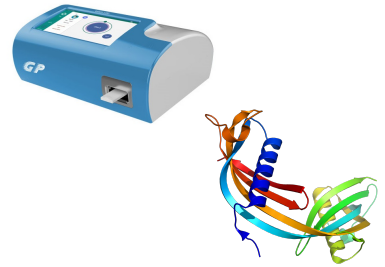
# SERUM CYSTATIN C AS EARLY MARKER FOR AKI OF PATIENTS AFTER CORONARY ANGIOGRAPHY: A PROSPECTIVE, OBSERVATIONAL STUDY IN MEXICAN POPULATION.

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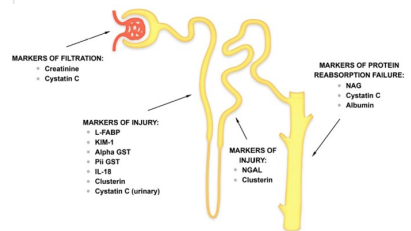
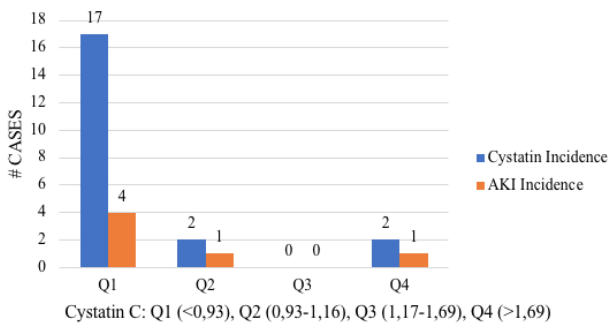
**Background:** Cystatin C is only filtered and metabolized in the kidney, which makes it the ideal marker of kidney function. High sensitivity and specificity for **early detection of acute kidney injury** and contrast induced kidney injury (C-AKI). Early identification of C-AKI after percutaneous coronary intervention may help to change the prognosis of this patients.

**Methods:** Prospective, observational study, 21 patients, Feb-2020 to Jan-2021. Capillary serum samples prior to contrast administration. Cystatin C was quantified by quantitative immunofluorescence analysis (GETEIN1100). Acute kidney injury (AKI) was defined by the KDIGO-AKI criteria. Follow up with creatinine every 24 hours for up to 72 hours. **Primary outcome** was to determine the incidence of acute kidney injury, **secondary outcome** was to determine comorbidities and epidemiological risk factors



**Results:** From the **21 patients**, 14 men (67%), 7 women (33%), the average age was 63 years. 28.5% had diabetes mellitus, 74.5% hypertension, 38.1% ischemic heart disease, and 4.6% had a history of cancer. Glomerular filtration rate by MDRD was 76.27 ml/min in the group without AKI and 68.7 ml / min in the group with AKI, without statistically significant differences ( $p=0.56$ ). There was statistically significant difference between both groups in the serum tests: Cystatin C 1.11 vs 1.20 ( $p=0.047$ ), Creatinine at 48h 0.91 vs 1.64 ( $p<0.001$ ), phosphorus 3.81 vs 4.8 ( $p=0.024$ ), glucose 105.86 vs 134.6 ( $p=0.021$ ), cholesterol 178.7 vs 117.7 ( $p=0.046$ ), iron 77.8 vs 45.7 ( $p=0.027$ ). It was divided into interquartile groups of cystatin C; Q1 ( $<0.93$  mg / dl), Q2 (0.93-1.16 mg / dl), Q3 (1.17-1.69 mg / dl), Q4 ( $>1.69$  mg / dl) where the incidence is 23.5%, 50%, in Q3 we have no data, and 50% respectively.

AKI INCIDENCE/CYSTATIN C QUARTILES



**Conclusion:** We founded **higher incidence of C-AKI** than previously reported. Major risk factors were **hyperglycemia, iron deficiency and low cholesterol levels**. Cystatin C use must continue to grow, it can be efficiently used as a screening tool in the Cath lab.