PREDICTIVE VALUE OF CHRONIC KIDNEY DISEASE (CKD) IN ACUTE KIDNEY INJURY (AKI) PRESENTATION IN AN INTENSIVE CARE UNIT (ICU) OF A LOCAL HOSPITAL.

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AIM and METHODS

To analyze the incidence of AKI, its severity acording to KDIGO criteria and the variables associated with its presentation through a multivariate logistic regressión model using AKI as a dependent variable, paying particular attention to previous history of chronic kidney disease (CKD)

SETTING

ICU of Reina Sofía Hospital, Tudela, Navarra, Spain, whose assistance is in charge of anesthesiology team. Reference population: 150000 inhabitants. Study population: all patients admitted to the unit for the years 2012, 2013 and 2014 for any reason.

RESULTS

•**1115** patients admitted. Mean **age** 69,7 ± 15 years (range 18-102)
•Male **gender** 61,3 %.

•738 patients (66,18 %) were admitted by **medical** cause and 337 (32,82 %) by **surgical** cause.

• 953 patients (85.47%) were **admitted urgently** and 162 (14.52%) on a scheduled basis.

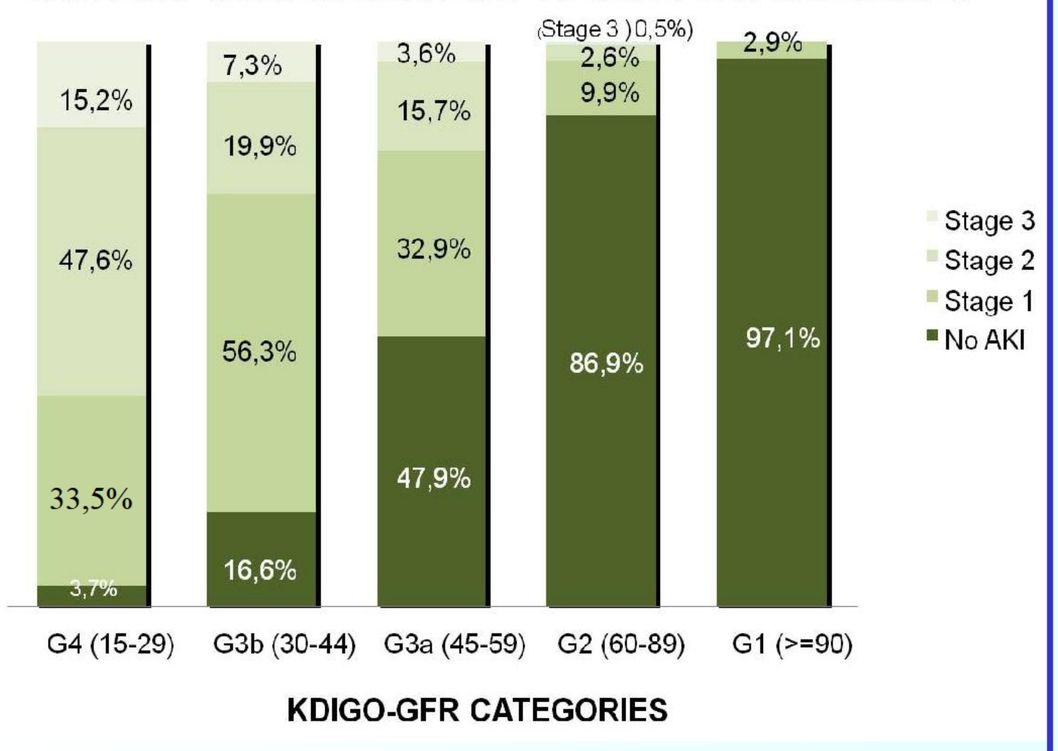
•Mean **Charlson Comorbidity Index** (CCI) was 6.2 ± 2.9.

• A total of 307 patients (27.53%) had **previous history of CKD**:
- •141 category 3a
- • 97 category 3b
- • 53 category 4
- •16 category 5. This group was excluded for analysis.

•486 patients (43,6 %) had **AKI during their stay in ICU:**
- •Stage 1: 21.1% (235 patients)
- •Stage 2: 13.8% (154 patients)
- •Stage 3: 8.7% (97 patients)

•AKI etiology was attributed to **acute tubular necrosis** in most cases.

•A total of 35 patients (7.2% of all AKI cases) required **hemodialysis.**



•**Figure 1.** Distribution of AKI-KDIGO stages according to GFR KDIGO-categories of CKD estimated by CKD-EPI formula from the baseline creatinine (mean of all measurements of serum creatinine in the 365 -7 days prior to admision)

	OR	95 % IC	p
CKD	5,99	4,58 to 8-18	0,000
Shock	4,70	3,34 to 6,61	0,000
Surgical vs medical cause	1,69	1.24 to 2.30	0,001
Male gender	1,37	1.02 to 1.85	0,038
CCI	1,17	1.09 to 1.26	0,000

•**Table 1.** Variables asociated with AKI presentation in ICU selected by the logistic regression model.

-Variables that were not statistically significant:
- Age
- Diabetes
- Heart failure
- COPD
- Serum albumin
- Hemoglobin

CONCLUSIONS

✓ AKI incidence (43.6%) was high in our study. 7.2% of AKI patients required hemodialysis treatment.

✓ CKD prior history was the main predictor of AKI presentation. AKI risk were six-fold increased in CKD patients. This population has a special predisposition for this compication in ICU.

✓ The incidence was particularly high in patients with CKD categories 3b and 4.

✓ Preventive measures should be implemented in patients admitted to an ICU with this background (CKD) as well as pay attention to other variables selected by the logistic regression model.

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