PNI AND NLR ROLE IN PATIENTS AFFECTED BY GASTROINTESTINAL PERITONEAL METASTASES TREATED WITH PRESSURIZED INTRAPERITONEAL AEROSOL CHEMOTHERAPY (PIPAC): A PROSPECTIVE ANALYSIS

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Background and aims

One of the most interesting and promising treatment method for chemotherapy administration in patients affected by peritoneal metastases (PM) is the pressurized intraperitoneal aerosol chemotherapy (PIPAC). Based on literature data, PIPAC should be repeated several times to enhance the treatment's efficacy. This study aimed to evaluate the prognostic value of Prognostic nutritional index (PNI) and neutrophil-to-lymphocytes (NLR) on the feasibility and survival in this setting.

Methods

Data of PM patients undergoing PIPAC at Fondazione Policlinico Gemelli IRCCS in Rome, between September 2018 and May 2020 were prospectively recorded.

Results

Fifty-one patients were enrolled (primary tumor: 39% gastric, 37% colorectal, 24% hepatobiliary pancreatic), of which 58% underwent multiple PIPAC cycles, with a pathological response rate of 55%. PNI (25.9 vs 40.7; $p<0.0001$) and NLR (6.2 vs 2.4; p: 0.001) predicted completion of more than one PIPAC cycle, with a cut-off of 36.5 and 4.8 respectively. At multivariate Cox regression analysis, only the presence of a low PNI (HR 2.41, 95% CI 1.08–5.46) was significantly associated with a worse OS.

Conclusions

Pretreatment PNI and NLR assessment may provide valuable information for PIPAC patients' selection and survival. Further larger studies are needed to validate their role in personalizing treatment and monitoring PM patients undergoing PIPAC. Moreover, a complete nutritional evaluation should be included in the routinary approach in patients undergoing these surgical treatments.