the chloramine T method (room temperature; reaction time = 120 s). The radiochemical yield (RCY) (n = 8) and stability (n = 3) were evaluated using ascending chromatography on TLC-SG strips and acetonitrile/water (95:5) as eluent. C6 and U-87 MG glioblastoma cell lines were cultured in supplemented DMEM medium (5% CO2 atmosphere; 37°C) until reaching ~85% confluence. Subsequently, aliquots of 2 x 10^6 C6 or U-87 MG cells were incubated with each radiopeptide (37°C) under agitation (500 rpm). In vitro binding and internalization percentages were assessed at 1 and 3 h post-incubation (n = 6). Data were expressed as 'mean ± standard deviation' and the statistical analysis was performed using GraphPad Prism software. **Results:** The RCY of [131I]I-anti-EGFr-LP and [131I]I-anti-EGFr-LG were 92.92 ± 3.42 and 97.80 ± 1.08, respectively. Both 131I-labeled peptides were radiochemically stable over 24 h. The in vitro interaction between C6 cells and [131I]I-anti-EGFr-LP showed binding percentages of 4.80 ± 0.37% (1 h) and 5.87±1.21% (3 h), with no statistically significant difference ($p = 0.1519$). The internalization percentages, within the bound fractions, increased from 64.45 ± 4.19% (1 h) to 75.15±1.60% (3 h) ($p < 0.0001$). For the [131I]I-anti-EGFr-LG, the data were of the same order of magnitude. The binding percentages increased from 3.95±0.33% (1 h) to 6.03 ± 0.66 (3 h) ($p < 0.0001$) and the internalization percentages, among the bound fractions, were 62.57±5.53% (1 h) and 64.04±3.21% (3 h), with no statistically significant difference ($p = 0.5959$). The in vitro interaction between U-87 MG cells and [131I]I-anti-EGFr-LP showed an increment of the binding percentages from 6.50 ± 0.93% (1 h) to 8.03 ± 0.29% (3 h) ($p < 0.0001$), but the internalization percentages, within the bound fractions, showed no statistically significant difference ($p = 0.2791$), 68.98 ± 2.23% (1 h) and 73.02±6.57% (3 h). For the [131I]I-anti-EGFr-LG, the binding percentages were 10.97±1.48 (1 h) and 11.28 ± 0.84 (3 h), with no statistically significant difference ($p > 0.6724$). The internalization percentages, among the bound fractions, were also statistically similar ($p > 0.3596$), 68.21 ± 0.16% (1 h) and 65.36 ± 3.56 (3 h). **Conclusion:** The in vitro interaction data revealed high affinity of [131I]I-anti-EGFr-LP and [131I]I-anti-EGFr-LG for the C6 and U-87 MG glioblastoma cell lines, which are known to overexpress EGFr. These preliminary findings support the potential use of these peptide inhibitors as specific peptide-based targeting molecules for EGFr, with potential applications as theranostic agents.

Keywords: EGFr-targeting peptide inhibitors, Glioblastoma cells, In vitro interactions, Radiolabeled peptides.

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SKELETAL MUSCLE RADIODENSITY AND INSULIN SENSITIVITY IN PATIENTS WITH RECTAL CANCER

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Introduction/Justification: The assessment of skeletal muscle attenuation via computed tomography plays a crucial role in identifying myosteatosis among cancer patients. Myosteatosis, characterized by ectopic adipose tissue infiltration in skeletal muscles, has been linked to poor prognosis in various cancers. However, its implications specifically in rectal cancer remain uncertain. Studies have shown that myosteatosis correlates with increased insulin resistance, highlighting the need for further investigation in clinical settings. **Objectives:** This study aimed to investigate the relationship between insulin sensitivity and skeletal muscle radiodensity in patients recently diagnosed with rectal cancer. **Materials and Methods:** A cross-sectional study design was employed, inviting patients diagnosed with rectal cancer to participate. Insulin sensitivity was assessed using the M-value obtained from euglycemic hyperinsulinemic clamp tests. Skeletal muscle analysis was conducted using computed tomography (CT) images of the third lumbar vertebra processed with SliceOmatic software. Skeletal muscle was defined within the attenuation range of -29 to +150 Hounsfield Units (HU), while intermuscular adipose tissue was defined within -190 to -30 HU. The mean skeletal muscle radiodensity (SMR) was reported. Demographic and clinical data were collected from medical records. Statistical analyses were performed using Stata Corp LP® version 17.0 software. The study protocol received approval from the Institutional Review Board (CAAE: 91217418.2.0000.5404). **Results:** The analysis included a total of 33 patients, predominantly male (67%) with ages ranging from 55 to 70 years (58%). Patients across stages I to IV were represented, with 48% in stage III, 11% in stage I, 11% in stage II, and 30% in stage IV. Overweight and obesity were diagnosed in 37.5% and 30% of the sample, respectively. Common comorbidities included diabetes (21%), hypertension (60%), and dyslipidemia (21%). The M-value adjusted for Total Body Weight (TBW) demonstrated a significant association with Skeletal Muscle Radiodensity ($rho = 0.3926$, $p = 0.0269$), whereas no statistical difference was observed when adjusting for Free Fat Mass (FFM) ($p = 0.1769$). **Conclusion:** In conclusion, our findings suggest a moderate positive association between insulin sensitivity and skeletal muscle radiodensity in rectal cancer patients.

Keywords: Insulin sensitivity, Rectal cancer, Skeletal muscle radiodensit.

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PROGNOSTIC EVALUATION OF THE NUTRITIONAL PROGNOSTIC INDEX IN PATIENTS WITH NON-METASTATIC RECTAL CANCER

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