FUNCTIONAL AND STRUCTURAL CHANGES IN THE ENTERIC NERVOUS SYSTEM OF THE CONDITIONAL KNOCK-IN MOUSE MODEL CARRYING THE RAD21 MISSENSE MUTATION CAUSING CHRONIC INTESTINAL PSEUDO-OBSTRUCTION

Francesca Bianco

UEG Week Copenhagen 2023 | Poster

Colorectal

October 16, 2023

A conditional knock-in mouse model expressing a CIPO-associated RAD21 mutation in the enteric nervous system exhibits delayed intestinal transit, reduced motility, and decreased cholinergic neurons.

KEY POINTS

- Rad21KI^A626T mice showed significantly delayed intestinal transit compared to wild-type controls (260.50±20.85 min vs. 190.00±12.25 min; P=0.0071).
- Mean motility index and mean active force were significantly reduced in Rad21KI^A626T vs. wild-type mice (3.00±0.23 vs. 5.26±0.58, P<0.005; and 0.45±0.05 vs. 0.94±0.10, P=0.0005, respectively).
- HuC/D/ChAT-positive myenteric neurons were significantly decreased in both small and large intestine of Rad21KI^A626T mice compared to controls.
- Synaptophysin levels were significantly reduced in both small and large intestine of Rad21KI^A626T mice, indicating lower synaptic density.
- The conditional knock-in mouse model is proposed as a novel tool for studying Chronic Intestinal Pseudo-Obstruction.

VIEW THIS CONTENT ON GUTFLIX

https://gutflix.eu/search/d/ca36ae1e-743c-11ee-af4e-0242ac140004

AI-generated summary

This summary was generated by an AI large language model based on the content transcript. It is for informational purposes only and should not be considered a substitute for clinical judgment. Always rely on your professional expertise and the full clinical context when making clinical decisions.