NLRP3/Il-1β Mediates Changes in Urothelial Muscarinic Receptors M2 and M3 during Bladder Outlet Obstruction in Rats

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Hypothesis/Aims
NLRP3 upregulates M2 and M3 during BOO

Study Design/Methods
BOO Surgery
12 Days
Glyburide or Anakinra
M2/M3 expression in urothelia by flow cytometry

Location of Inhibition
IL-1β

Results
• Bladder weight (inflammation) is increased during BOO
• Glyburide or Anakinra blocked this increase

Location of Inhibition
Anakinra

IL-1β upregulates M2 expression in urothelia in vitro (flow cytometry)

Proposed IL-1β Autocrine Loop in Urothelia

Conclusion: NLRP3 regulates urothelial M2 and M3 expression during BOO