

## Accepted Manuscript

Unsteady non-Newtonian blood flow through a tapered overlapping stenosed catheterized vessel

N. Ali , A. Zaman , M. Sajid , J.J. Nieto , A. Torres

PII: S0025-5564(15)00172-8  
DOI: [10.1016/j.mbs.2015.08.018](https://doi.org/10.1016/j.mbs.2015.08.018)  
Reference: MBS 7680



To appear in: *Mathematical Biosciences*

Received date: 7 April 2015  
Revised date: 21 August 2015  
Accepted date: 28 August 2015

Please cite this article as: N. Ali , A. Zaman , M. Sajid , J.J. Nieto , A. Torres , Unsteady non-Newtonian blood flow through a tapered overlapping stenosed catheterized vessel, *Mathematical Biosciences* (2015), doi: [10.1016/j.mbs.2015.08.018](https://doi.org/10.1016/j.mbs.2015.08.018)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Highlights**

- A mathematical study is presented for unsteady pulsatile flow of blood through a tapered overlapping stenosed catheterized vessel.
- Magnetic field is taken into account.
- The taperness of artery is considered in the present analysis. The rheology of blood is described by the constitutive equation of Carreau model.
- The combined effects of the non-Newtonian rheology of blood, the vessel tapering, the severity of stenosis and catheterization on blood velocity and flow rate are analyzed in detail.
- The flow patterns illustrating the global behavior of blood are also presented.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/6371914>

Download Persian Version:

<https://daneshyari.com/article/6371914>

[Daneshyari.com](https://daneshyari.com)