



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات
لم ترد بالأصل

SERUM SUBSTANCE P AND ITS CLINICAL SIGNIFICANCE

Essay

Submitted for partial fulfillment of
Master Degree in
Clinical and Chemical Pathology

By
Reem Hussien Mostafa
M.B., B.Ch.

Supervised By

Prof. Dr. Gehan Kamal Hassan Ali
Prof. of Clinical and Chemical Pathology
Faculty of Medicine, Ain Shams University

Assist. Prof. Dr. Dalia Helmi Farag
Assist. Prof. of Clinical and Chemical Pathology
Faculty of Medicine, Ain Shams University

Dr. Mona Mostafa Osman
Lecturer of Clinical and Chemical Pathology
Faculty of Medicine, Ain Shams University

Department of Clinical Pathology
Faculty of Medicine
Ain Shams University
2000

B 0204





﴿قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ﴾

صدق الله العظيم

[البقرة: ٣٢]

I'd like to express my deepest
Thanks to Prof
Prof. Kamal Hassan Ali

Acknowledgement

*Thanks to God who granted me the power to
accomplish this work.*

*My deepest gratitude to Prof. ~~Dr.~~ Ghehan
Kamal Hassan Ali, Prof. of Clinical and Chemical
Pathology, Ain Shams University, for her kind
supervision, guidance and advice.*

*Heartily, thanks to Dr. Dalia Helmi Farag,
Assist. Prof. of Clinical and Chemical Pathology, Ain
Shams University, for her meticulous supervision,
her valuable instructions and for offering me much
of her time and effort.*

*Many thanks to Dr. Mona Mostafa Osman,
Lecturer of Clinical and Chemical Pathology, Ain
Shams University, for her great support, kind
advice and valuable suggestions.*

Contents

	<u>Page</u>
List of Abbreviations.....	
List of Tables	
List of Figures	
Introduction and aim of the work.....	1
Review of Literature.....	
I. Substance P.....	3
A. Historical back ground	3
B. Chemistry of SP.....	5
C. Synthesis, transport and release of SP	6
D. Degradation of SP	8
E. Biological actions of SP.....	10
1. Action of SP on the nervous system.....	10
a. Pain transmission	10
b. Axon reflex and triple response.....	11
c. Central nervous system.....	11
2. Action of SP on the circulatory system	12
3. Action of SP on the gastrointestinal tract.....	13
4. Effect of SP on water homeostasis	13
5. Effect of SP on body secretions.....	14

6. Effect of SP on the immune system	14
F. SP receptors	16
G. SP antagonists	17
H. Physiological variations	18
I. Therapeutic role of SP.....	19
II. Methods of Assay of SP	20
A. Sampling and storage	20
B. Extraction of SP from plasma or serum	20
1. Liquid-liquid extraction	21
2.Extraction by column chromatography	21
C. Methods of Assay	25
1. Radioimmunoassay	25
a. Principle	25
b. Assay procedure	27
c. Advantages	28
d. Disadvantages	29
2. Enzyme-multiplied immunoassay	31
a. Principle	31
b. Assay procedure	32
c. Advantages	33
III. Clinical significance of SP in disease	
conditions.....	35

1. SP and sickle cell disease	35
2. SP and arthritis	37
3. SP and Vernal keratoconjunctivitis	40
4. SP and liver disease.....	41
5. Other diseases associated with increased tissue level of SP	45
a. Asthma	45
b. Inflammatory bowel diseases	46
c. Inflammatory skin conditions	48
d. SP and human Gliomas	48
Summary and Conclusions	50
References.....	53
Arabic Summary	--

