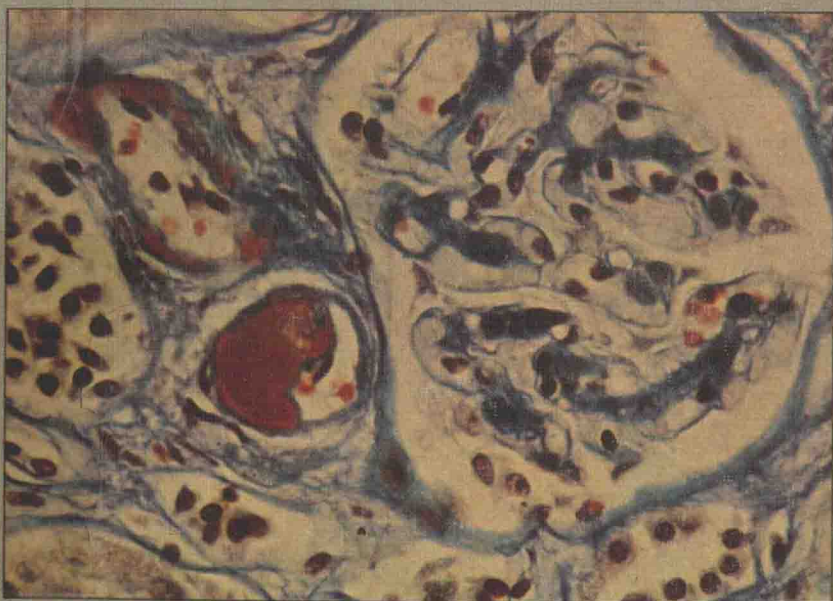


YEAR BOOK *Color Atlas Series*

COLOR ATLAS
OF
General
Pathology

G. AUSTIN GRESHAM



COLOR ATLAS OF General Pathology

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Contents

THE CONCEPT OF DISEASE	6
EXAMINATION OF SECTIONS	7
THE LESION	11
THE NORMAL CELL AND TISSUE	15
Cellular Structure	15
Cellular Chemistry	23
Histochemistry	23
Fluorescence Microscopy	28
Autoradiography	29
Cellular Variation	33
Cell Types	33
Atrophy	39
Hypertrophy	45
Hyperplasia	49
Metaplasia	53

CELLULAR DAMAGE	59
Swelling	59
Vacuolation	63
Accumulations	70
Autolysis	86
Necrosis	87
 CAUSES OF CELLULAR DAMAGE	 97
Animate Agents	97
Virus Rickettsia Mycoplasma	97
Bacterium and Fungus	103
Protozoon	115
Metazoon	119
Inanimate Agents	123
Heat Radiation Poison	123
 RESPONSES TO CELLULAR DAMAGE	 128
General	130
Fever Leucocytosis Antibody	130
Thrombocytosis	130
Local	137
Inflammation (Acute)	137
Inflammation (Chronic)	145
Granuloma	158
Giant cells	165
Repair and Regeneration	185

PATTERNS OF DISEASE	188
Infection	188
Trauma	199
Ischaemia	215
Degeneration	233
Ageing and Arteriosclerosis	233
Hypertensive Vascular Disease	243
Heart Failure	246
Atherosclerosis	263
Allergy	271
Intoxication	287
Nutritional Disorder	294
Neoplasia	301
ARTEFACTS	341
GLOSSARY	349
FURTHER READING	354
INDEX	357
ACKNOWLEDGEMENTS	365

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Swelling	59
Vacuolation	63
Accumulations	70
Autolysis	86
Necrosis	87
 CAUSES OF CELLULAR DAMAGE	 97
Animate Agents	97
Virus Rickettsia Mycoplasma	97
Bacterium and Fungus	103
Protozoon	115
Metazoon	119
Inanimate Agents	123
Heat Radiation Poison	123
 RESPONSES TO CELLULAR DAMAGE	 128
General	130
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Thrombocytosis	130
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Atherosclerosis	263
Allergy	271
Intoxication	287
Nutritional Disorder	294
Neoplasia	301
ARTEFACTS	341
GLOSSARY	349
FURTHER READING	354
INDEX	357
ACKNOWLEDGEMENTS	365

The Concept of Disease

PATHOLOGY is the science of disease. It is concerned with the causes of disease or disorder and the effects of disease-producing agents upon living things, both plants and animals. The ultimate aim of many people who study pathology is the prevention and cure of disease; but first we must study disease as an entity in itself. Only in this way, without the impelling demand to avoid or to treat, can we start impartially to discover mechanisms in the disease producing process.

This atlas is about disease processes, that is to say the various events that appear as disease occurs and progresses. It shows pictures of various tissue and cellular responses to injurious agents. The idea is to lay a foundation of knowledge about fundamental responses that are common to many disorders. When the student has mastered the basic responses he will find no difficulty in understanding special disorders in various systems of the body. For example, inflammation is a basic reaction of many living things to injury of various sorts. Whatever be the cause of inflammation the response and the mechanisms responsible are fundamentally the same.

This, then, is an atlas of general rather than special pathology and is prepared for medical students and other students of biology.

A mole with fungus disease of its lungs is as interesting as a cow with tuberculosis and a man with stomach cancer. Each is a living thing responding to injury. The patterns of response that they exhibit are the subject of our studies in this book.

G. AUSTIN GRESHAM

To my family

Examination of Sections

MOST OF THE WORK that is done in general pathology is concerned with thin, stained sections of tissues rather than with a study of whole organs. The majority are stained with Haematoxylin (blue) and Eosin (red) (H and E); occasionally other stains help to elucidate the nature of the process (special stains).

It is important to have a regular routine for the examination of sections. First look with a hand lens and make a low power drawing. This indicates the need to study different parts of the section. Then turn to the microscope. Most of the useful information can be derived from a study with a low power objective. Higher power lenses are generally less useful except for a study of cell detail.

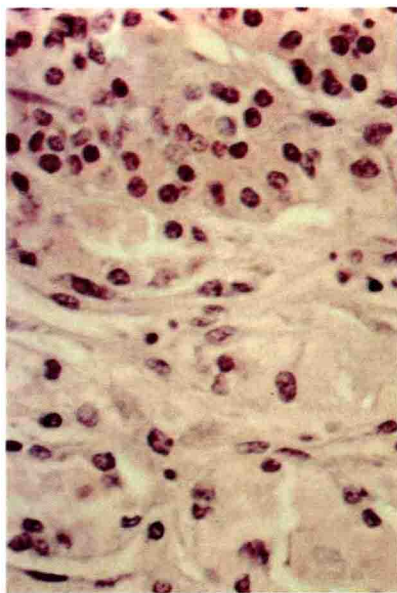
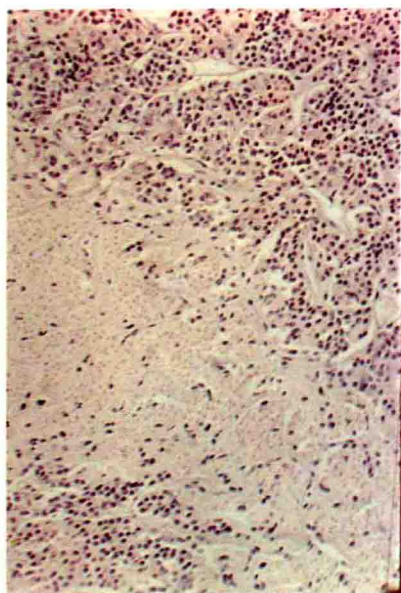
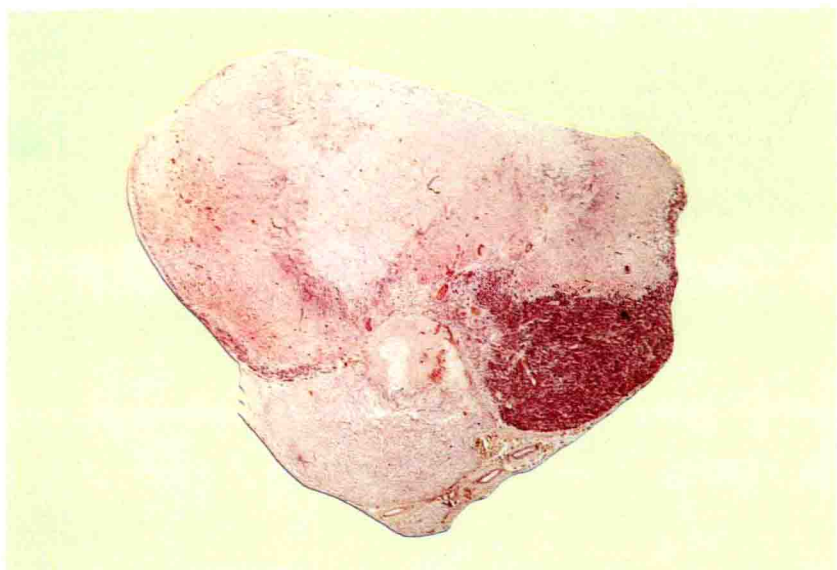
Having studied the section write a description of it. Whether you can interpret your findings or not is immaterial at this stage. First learn to observe thoroughly and accurately; diagnosis will then come easily and automatically.

EXAMINATION OF A SECTION

Fig. 1. Very low power view of a pituitary to show pink areas of necrosis (cellular death) (H and E x 6)

Fig. 2. Higher power view of a pituitary showing an eosinophilic band of necrotic tissue across the middle of the section (H and E x 45)

Fig. 3. Even higher power view of a necrotic pituitary. Note the loss of nuclear staining in the necrotic area below (H and E x 220)



The Lesion

IT IS CONVENIENT to have a general term to describe anything that is wrong with a living thing. The term we use is "lesion"; literally this means a hurting. So we call a fracture of the skull a lesion, a boil on the skin a lesion, a tumour of bone a lesion, and so on. Lesions are often seen with the naked eye; they are said to be macroscopic. Further elucidation of their nature can only be obtained when a thin section is examined under the microscope. Most of this atlas is about microscopic appearances of lesions for only in this way can the precise mechanism of causation be determined.