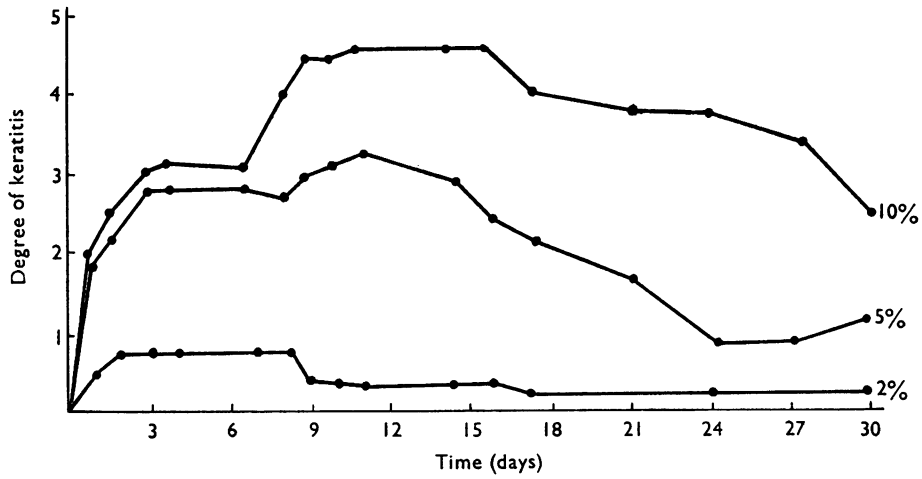

FIG. 1. The effects of ω-chloracetopenone on the rabbit cornea, plotted to show the effects of increasing concentrations. The degree of corneal damage is represented on a 5-point scale varying from slight swelling of the cornea with minimal acute inflammatory cell infiltration (point 1) to gross opacification with deformity of the cornea (point 5).

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Application of an inexpensive analogue computer for the continuous determination of airways dynamic compliance and resistance

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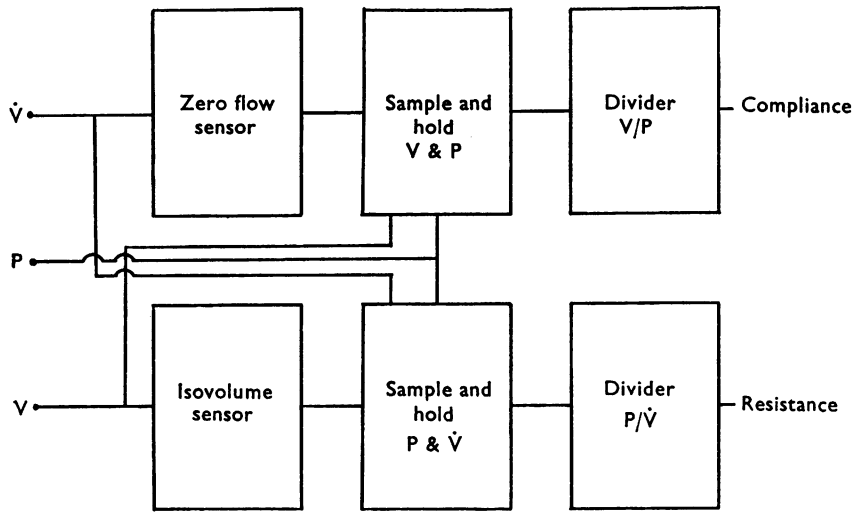
An on-line analogue computer was described by Dennis, Douglas, Casby, Stolwick & Bouhuys (1969) for determination of compliance and resistance. Certain defects in their design were reported by Giles, Finkel & Mazurowski (1971). Douglas, Dennis, Ridgeway & Bouhuys (972) have made available a new circuit design.

The new computer has been constructed in our laboratories and adapted for use with Devices pen recorders. The output signals are also led, via calibration units, to provide continuous visual display of compliance and resistance in absolute units.

During experiments, flow ($\dot{V}$), tidal volume (V), and transpulmonary pressure (P) signals are fed continuously into the computer. Values of dynamic compliance are computed for each breath at points of zero flow from instantaneous volume



and pressure signals. Values of airways resistance are computed for each breath at isovolume points from instantaneous pressure and flow signals.

Tape-recorded signals of V̇, V & P from experimental animals will be used to demonstrate the computer.

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The role of adenosine diphosphate (ADP) in collagen-induced platelet aggregation

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When a suspension of collagen is added to citrated platelet-rich-plasma (PRP), aggregation (Zucker & Borrelli, 1962) and a release of ADP (Hovig, 1963) occurs. On the evidence that adenosine monophosphate, an inhibitor of ADP-induced aggregation (Born, 1962), antagonized collagen-induced aggregation but not collagen-induced release, Hovig proposed that the liberated ADP mediated the aggregation seen after addition of collagen. This explanation has found general acceptance (Mustard & Packham, 1970). The present work demonstrates two aspects of collagen-induced aggregation that are not compatible with this concept.

Human citrated PRP was gently mixed with 0·1 volumes 1 mM ADP and left to stand at room temperature for 3·5–4 h. The responsiveness of this ADP-treated PRP to ADP and to collagen (prepared as described by Holmsen, Day & Storm,