

CLAIMS

1. A drug solution administration unit, comprising:

a drug solution administration module comprising

a first flow path unit including an upstream side main body where a first flow path to store drive solution is formed,

a second flow path unit including a downstream side main body where a second flow path to store drug solution is formed, and

a drive mechanism unit including a pair of electrodes and a porous body sandwiched between the pair of electrodes, the drive mechanism unit having a connecting flow path connecting a downstream end of the first flow path and an upstream end of the second flow path; and

a drug solution administration device to which the drug solution administration module is mounted,

wherein the drug solution administration module has a drug solution connecting unit at a downstream end of the second flow path,

the drug solution administration device comprises :

a housing where a containment unit to store the drug solution administration module is formed,

inside of the housing, a branch path where the second flow path is connected, and

inside of the housing, a main path that is branched from a downstream side of the branch path and connected to an intravenous tube,

the main path connects an upstream connecting unit with a downstream connecting unit,

the upstream connecting unit connects the main path with the intravenous tube on the upstream side,

the downstream connecting unit connects the main path with the intravenous tube on the downstream side,

wherein the drug solution administration device has a flow path connecting unit at an upstream end of the branch path to which the drug solution connecting unit is connected.

2. The drug solution administration unit as claimed in claim 1, wherein, in the drug solution administration module,

the drive solution is filled in the first flow path and the connecting flow path, and the drug solution is filled in the second flow path, and

an amount of the drug solution is 105% to 110 % of an amount of the drive solution.

3. The drug solution administration unit as claimed in claim 1 or 2, wherein
the drug solution administration device further comprising a control unit being connected to the pair of electrodes for controlling an operation of the drive mechanism unit.

4. The drug solution administration unit as claimed in claim 3, wherein
the drug solution administration device is configured to be able to mount a plurality of the drug solution administration modules.

5. The drug solution administration unit as claimed in claim 4, comprising a plurality of the drug solution administration modules,

wherein the control unit controls operation of respective drive mechanism unit of each drug solution administration module based on flow rate data indicating flow rate of drug solution administration by the plurality of the drug solution administration modules and administration data indicating a timing of the drug solution administration.

6. The drug solution administration unit as claimed in claim 4 or 5, wherein
the control unit has a function of simultaneously administering drug solution by two or more of the plurality of the drug solution administration modules.

7. The drug solution administration unit as claimed in any one of claim 4 to 6, wherein
the control unit has a function to, when drug solution administration by one or more of the plurality of the drug solution administration modules is completed and scheduled waiting time has elapsed, start administering drug solution by another one or more of the plurality of the drug solution administration modules.

8. The drug solution administration unit as claimed in any one of claim 3 to 7, comprising a plurality of the drug solution administration devices, wherein

the control unit of each of the plurality of drug solution administration devices controls operation of the drive mechanism unit of the drug solution administration module associated with itself in cooperation with each other.

9. A medication management system comprising:

the drug solution administration unit as claimed in any one of claims 3 to 7;

an analysis processing device for analyzing personal data including information on patient attributes and drug solution data including information on flow rate of drug solution in the drug solution administration module; and

a management device having a display unit,

wherein the display unit displays information based on an analysis result by the analysis processing device.

10. The medication management system as claimed in claim 9, wherein

the analysis processing device obtains a recommended flow rate value as a predicted value of optimum flow rate of drug solution in the drug solution administration module by using the personal data and the drug solution data, and

the display unit displays recommended information including the recommended flow rate value.

11. The medication management system as claimed in claim 9 or 10, wherein

the personal data includes vital data of a patient,

the analysis processing device obtains vital prediction information indicating future changes of the vital data by using the personal data and the drug solution data, and

the display unit displays information based on the vital prediction information.