

Short report

Genetics in art

Alan E H Emery, Marcia Emery

Medical School,
University of
Edinburgh, Teviot
Place, Edinburgh EH8
9AG, UK
A E H Emery
M Emery

Correspondence to
Professor A E H Emery.

Received 7 December 1993
Accepted for publication
14 December 1993

The relationship between art and medicine can be considered from essentially two points of view: diseases in artists which have affected their work, and diseases which have been depicted by artists whose work sometimes illustrates diagnostic procedures or treatments current at the time.^{1,2}

Several well known artists have themselves suffered from genetic disorders. These include, for example, colour blindness in Fernand Léger and Piet Mondrian, strabismus in Albrecht Dürer, Fallot's tetralogy in Dick Ket, and pyknodysostosis in Toulouse-Lautrec. Such defects have not infrequently affected the artist's work.^{1,3} In table 1 we have listed genetic disorders which have actually been depicted in paintings. In some cases the diagnosis is clear cut and unequivocal but in others it can only be speculative. This is particularly a problem in the case of dwarfism, which has frequently

attracted the attention of artists from earliest times,^{4,5} but where the specific diagnosis is often not clear. These have therefore been listed separately (table 2).

As far as possible we have personally checked the location and other details of each painting. The material is presented in the hope that it will be found useful to readers when visiting centres in cities where these works are held.

- 1 Emery AEH. Medicine, genetics and art. *Proc R Coll Physicians Edinb* 1991;21:33-42.
- 2 Emery AEH, Emery M. Medicine and art: diagnosis and medical treatment. *Proc R Coll Physicians Edinb* 1992;22:519-42.
- 3 Emery AEH, Emery M. Medicine and art. In: Walton JN, Lock S. eds. *New Oxford medical companion*. Oxford: Oxford University Press (in press).
- 4 Kunze J, Nippert I. *Genetics and malformations in art*. Berlin: Grosse Verlag, 1986.
- 5 Dasen V. *Dwarfs in ancient Egypt and Greece*. Oxford: Clarendon Press, 1993.

Table 1 Various genetic disorders depicted in works of art

Diagnosis	Painting		Artist
	Title (Date)	Location	
Albinism	<i>Nude Girl on a Fur</i> (1932)	Scottish National Gallery of Modern Art (Edinburgh)	Otto Dix (1891-1969)
Blindness	<i>Parable of the Blind</i> (1568) (four different types)	Galleria Nazionali di Capodimonte (Naples)	Pieter Brueghel (c 1525-1569)
	<i>The Blind Man of Gambazo or The Sense of Touch</i> (1632)	Prado (Madrid)	Jusepe de Ribera (1591-1652)
	<i>A Wedding Morning</i> (c 1892)	Lady Lever Art Gallery (Port Sunlight)	John Henry Frederick Bacon (c 1866-1914)
Cleft lip	<i>Boy with Cleft Lip</i> (1902)	Tretiakov Gallery (Moscow)	Mikhail Vrubel (1856-1910)
Club foot	<i>Feeding the Hungry</i> (1504) (from the <i>Altarpiece of the Seven Works of Mercy</i>)	Rijksmuseum (Amsterdam)	Master of Alkmaar (active 1490-1520)
Craniodysostosis (?Crouzon's disease)	<i>Count N D Guriev</i> (1821)	Hermitage (St Petersburg)	Jean-Auguste-Dominique Ingres (1780-1867)
Digital abnormalities			
Absent digit	<i>Ernest Reinhold</i> (1908)	Musée des Beaux-Arts (Brussels)	Oskar Kokoshka (1886-1980)
Polydactyly	<i>Self Portrait with Seven Fingers</i> (1912)	Stedelijk Museum (Amsterdam)	Marc Chagall (1887-1985)
Syndactyly	<i>Portrait of a Canon</i> (identified as Nicolai Aegidius) (1517)	Royal Museum of Arts (Antwerp)	Quentin Massys (c 1465-1530)
Thumb deformity	<i>Erasmus</i> (1517)	Galleria Nazionale d'Arte Antica (Rome)	Quentin Massys (c 1465-1530)
Down's syndrome	<i>Adoration of the Shepherds</i> (c 1617)	Grenoble Museum	Jacob Jordaens (1593-1678)
	<i>The Peasant and the Satyr</i> (c 1638)	Staatliche Kunstsammlungen (Kassel)	Jacob Jordaens (1593-1678)
	<i>A Child with Nondisjunction</i> (nd)	Private collection	Josef Warkany (1902-1992)
Duchenne muscular dystrophy (?)	<i>The Transfiguration</i> (1520)	Vatican Picture Gallery (Rome)	Raphael (1483-1520)
	<i>Sick Boy</i> (1915)	Formerly Städtische Kunstsammlung Chemnitz (Karl-Marx-Stadt, Germany)	Karl Schmidt-Rottluff (1884-1976)
Dupuytren's contracture	<i>Portrait of Fridel Battenberg</i> (1920)	Sprengel Museum (Hanover)	Max Beckmann (1884-1950)
Epidermolysis bullosa (?syphilis)	<i>Head of a Young Man</i> (early 16 C)	Fogg Art Museum (Cambridge, Massachusetts)	Hans Holbein The Younger (1497/8-1543)
	<i>Heritage</i> (1899)	Munch Museum (Oslo)	Edvard Munch (1863-1944)
Fallot's tetralogy with dextrocardia	Various self-portraits	Gemeentemuseum (Arnhem)	Dick Ket (1902-1940)
Female hirsutism	<i>The Bearded Woman of Peñaranda</i> (c 1590s)	Prado (Madrid)	Juan Sánchez Cotán (1561-1627)
	<i>Magdalena Ventura</i> (1631)	Lerma Foundation (Toledo)	Jusepe de Ribera (1591-1652)
	<i>Woman with a Beard</i> (1957)	Private collection (UK)	L S Lowry (1887-1976)
Hapsburg jaw	<i>Emperor Charles V at Mühlberg</i> (1547)	Prado (Madrid)	Titian (c 1487-1576)
Hemiplegia	<i>The Clubfooted Boy</i> (1642)	Louvre (Paris)	Jusepe de Ribera (1591-1652)
Hypertrichosis universalis	<i>Portrait of Peter Gonzales and his Children</i> (c 1582)	Kunsthistorisches Museum (Vienna)	Bavarian (artist unknown)
Klippel-Feil anomaly	Illustrations of <i>The Book of Job</i> (1852)		William Blake (1757-1827)
Lesch-Nyhan syndrome (?)	<i>Three Miracles of Saint Zenobius</i> (c 1490-1510)	National Gallery (London)	Sandro Botticelli (1445-1510)
Mental disease (epilepsy, "madness", hysteria, etc)	<i>The Cure for Folly</i> (c 1480)	Prado (Madrid)	Hieronymus Bosch (c 1450-1516)
	<i>St Catherine Exorcising a Possessed Woman</i> (15th C)	Denver Art Museum	Girolamo di Benvenuto (1470-c 1524)
	<i>The Miracle of St Croce's Relics or Healing of the Madman</i> (c 1496)	Accademia (Venice)	Vittore Carpaccio (c 1465-1526)
	<i>The Cure of Folly</i> (c 1556)	Prado (Madrid)	Jan Sanders van Hemessen (c 1500-1575)

Table 1—contd

Diagnosis	Painting		Artist
	Title (Date)	Location	
	<i>The Quack</i> (c 1656–60)	Rijksmuseum (Amsterdam)	Jan Steen (c 1626–1679)
	<i>The Extraction of the Stone</i> (1650–65)	Boymans Museum (Rotterdam)	Jan Steen (c 1626–1679)
	<i>A Quack Drawing Stones from the Head of a Patient</i> (Dutch school, 17th C)	Boymans Museum (Rotterdam)	Attributed to Jan de Bray (c 1627–1697)
	<i>The Madhouse from The Rake's Progress</i> (1734)	John Soane Museum (London)	William Hogarth (1697–1764)
	<i>The Madhouse of Saragossa</i> (1794)	Meadows Museum (Dallas)	Francisco Goya (1746–1828)
	<i>The Madhouse</i> (c 1800)	Academia San Fernando (Madrid)	Francisco Goya (1746–1828)
	<i>A Case of Mania</i> (etching) (1838)	National Library of Medicine (Bethesda, Maryland)	Ambroise Tardieu (1818–1879)
	<i>Mania Succeeded by Dementia</i> (etching) (1838)	Philadelphia Museum of Art	Ambroise Tardieu (1818–1879)
	<i>Maniac During an Attack</i> (etching) (1838)	Library, Faculty of Medicine (Paris)	Jean Esquirol (1772–1840)
	<i>Philippe Pinel Releasing the Inmates of Bicêtre</i> (c 1840–50)	National Academy of Medicine (Paris)	Charles Müller (b 19th C)
	<i>Charcot Presenting an Hysterical Patient</i> (19th C)	Neurological Hospital (Lyons)	André Broussais (1857–1920)
	<i>The San Bonifacio Asylum</i> (1865)	International Gallery of Modern Art (Venice)	Telemaco Signorini (1835–1901)
	<i>Dr Pinel Unchaining the Mad</i> (1876)	Charcot Library (Salpêtrière)	Tony Robert-Fleury (1837–1911)
	<i>Electric Shock Treatment</i> (1908)	Munch Museum (Oslo)	Edvard Munch (1863–1944)
	<i>Insane People at Mealtime</i> (drypoint) (1914)	Philadelphia Museum of Art	Erich Heckel (1883–1970)
	<i>The Psychiatrist</i> (1945)	City Art Gallery (Birmingham)	Stanley Spencer (1891–1959)
	<i>Portrait of Dr Fritz Perls</i> (1966)	Otto Dix Foundation (Vaduz)	Otto Dix (1891–1969)
	<i>Healing of a Lunatic Boy</i> (1986)	National Gallery of Modern Art (Edinburgh)	Stephen Conroy (b 1964)
Noonan's syndrome (?)	<i>The Madhouse</i> (1988)	Artist's collection (Paris)	Sergei Chepik (b 1953)
	<i>Among Those Left</i> (1929)	Museum of Art, Carnegie Institute (Pittsburgh)	Ivan Le Lorraine Albright (1897–1983)
Pectus carinatum	<i>Agosta the Pigeon-Chested Man & Rasha the Black Dove</i> (1929)	Private collection	Christian Schad (1894–1982)
Phocomelia	<i>Girl with Wooden Leg and No Arms</i> (1514) (? gross trauma)	Public Art Museum (Basle)	Urs Graf (c 1485–1527/8)
	<i>Charles Emmanuel I of Savoy as a Child Accompanied by a Dwarf</i> (1573)	National Gallery (Turin)	Giacomo Vighi called Argenta (?–1573)
Prader-Willi syndrome (?)	<i>Mother with Deformed Infant</i> (c 1805)	Louvre (Paris)	Francisco Goya (1746–1828)
Pycnodysostosis	<i>Eugenia Martinez Vallejo, La Monstrua</i> (c 1680)	Prado (Madrid)	Juan Carreño de Miranda (1614–1685)
Spastic paraplegia	Various self-portraits		Henri de Toulouse-Lautrec (1864–1901)
Strabismus	<i>Child on all Fours (After Muybridge)</i> (1961)	Gemeentemuseum (The Hague)	Francis Bacon (1909–1992)
	<i>Self Portrait</i> (c 1491)	Erlangen-Nürnberg Universitätsbibliothek	Albrecht Dürer (1471–1528)
	<i>Portrait of the Artist</i> (1493)	Louvre (Paris)	Albrecht Dürer (1471–1528)
	<i>Laughing Peasant Woman</i> (1505)	British Museum (London)	Albrecht Dürer (1471–1528)
	<i>Dürer's Mother</i> (1514)	Kupferstichkabinett (Berlin)	Albrecht Dürer (1471–1528)
	<i>Count Tommaso Inghirami</i> (1513–14)	Museum of Fine Arts (Boston)	Raphael (1483–1520)
	<i>Caspar Sturm</i> (1520)	Musée Condé (Chantilly)	Albrecht Dürer (1471–1528)
	<i>Fedra Inghirami</i> (1516)	Pitti (Florence)	Raphael (1483–1520)
	<i>Margrave Albrecht von Brandenburg, Duke of Prussia</i> (1528)	Herzog Anton Ulrich Museum (Braunschweig)	Lucas Cranach (1472–1553)
	<i>Portrait of Calabazas</i> (c 1632)	Cleveland Museum of Art	Velázquez (1599–1660)
	<i>Archibald Campbell</i> (c 1660)	National Portrait Gallery (Edinburgh)	David Scougall (active 1654–1677)
	<i>Little Girl with a Squint</i> (c 1961)	Gracefield Art Centre (Dumfries, Scotland)	Joan Eardley (1921–1963)
Synophrys	Various self-portraits	Museum of Modern Art (New York) and private collections	Frida Kahlo (1907–1954)
Thoracopagus	<i>Joined Twins</i> (nd)	Gemeentemuseum (The Hague)	E C van der Maas (1577–1656)
White forelock (?acquired)	<i>James McNeill Whistler</i> (1885)	Metropolitan Museum (New York)	William Merritt Chase (1849–1916)
	<i>James McNeill Whistler</i> (c 1895)	Kupferstichkabinett (Berlin)	Thomas R Way (1861–1913)

Table 2 Dwarfism depicted in works of art

Diagnosis	Painting		Artist
	Title (Date)	Location	
Disproportionate short stature			
Achondroplasia	<i>The Court Scene</i> from fresco, Camera degli Sposi (1474)	Palazzo Ducale (Mantua)	Andrea Mantegna (c 1431–1506)
	<i>Arrival of the English Ambassadors</i> (1495–1500)	Accademia (Venice)	Vittore Carpaccio (c 1465–1526)
	<i>The Dwarf Morgante</i> (c 1552)	Deposita della Soprintendenza (Florence)	Angelo di Cosimo Bronzino (1503–1572)
	<i>The Family of Darius before Alexander</i> (c 1570)	National Gallery (London)	Paolo Veronese (c 1528–1588)
	<i>The Finding of Moses</i> (1570–80)	Prado (Madrid)	Paolo Veronese (c 1528–1588)
	<i>Apollo Killing the Cyclops</i> (1616–18)	National Gallery (London)	Domenichino (Domenico Zampieri) (1581–1641)
	<i>Artist's Studio</i> (nd)	Bode Museum (Berlin)	Jan Miense Molenaer (c 1610–1668)
	<i>Don Baltasar Carlos with a Dwarf</i> (1631–32)	Isabella Stewart Gardner Museum (Boston)	Velázquez (1599–1660)
	<i>Peter's Denial of Christ</i> (1636)	Szépművészeti Múzeum (Budapest)	Jan Miense Molenaer (c 1610–1668)
	<i>Calabazas</i> (1637–1639)	Prado (Madrid)	Velázquez (1599–1660)
	<i>Las Meninas</i> (1656)	Prado (Madrid)	Velázquez (1599–1660)
	<i>Il Cavadenti</i> (c 1730)	Brera Gallery (Milan)	Pietro Longhi (1702–1785)
	<i>Francesco Ravai called Bajocco</i> (1773)	Kunstmuseum (Copenhagen)	Jens Juel (1745–1802)
	<i>The Dwarf Doña Mercedes</i> (1899)	Musée d'Orsay (Paris)	Ignacio Zuloaga (1870–1945)
Diastrophic Pseudoachondroplasia	<i>Sebastián de Morra</i> (c 1644–51)	Prado (Madrid)	Velázquez (1599–1660)
Spondyloepiphyseal dysplasia (?)	<i>El Primo</i> (1644)	Prado (Madrid)	Velázquez (1599–1660)
	<i>Aragonese Dwarf</i> (1825)	Fogg Art Museum (Cambridge, Massachusetts)	Vicente Lopez-y-Portana (1772–1850)
	<i>Achille Empeaire</i> (1820–1898), <i>Aixois Painter</i> (c 1868)	Musée d'Orsay (Paris)	Paul Cézanne (1839–1906)
Other/various	<i>El Niño de Vallecas-Francisco Lezcano</i> (1637)	Prado (Madrid)	Velázquez (1599–1660)
	<i>Dwarf with a Dog</i> (1643)	Formerly in Lederer collection (Vienna)	Jusepe de Ribera (1591–1652)
	<i>Boys with Dwarfs</i> (1646)	Stedelijk van Abbemuseum (Eindhoven)	Jan Miense Molenaer (c 1610–1668)
	<i>Jacoba Maria van Wassenaer or Bernardina Margriet van Raesfeld</i> (1660)	Mauritshuis (The Hague)	Jan Steen (c 1625–1679)
	<i>Gregorio the Dwarf</i> (1908)	Hermitage (St Petersburg)	Ignacio Zuloaga (1870–1945)

Table 2—contd

Diagnosis	Painting		Artist
	Title (Date)	Location	
Proportionate short stature	<i>Adoration of the Kings</i> (c 1472)	National Gallery (London)	Sandro Botticelli (1445–1510) Bonifazio Veronese di Pitati (c 1487–1553) Anthonis van Dashorst (called Antonio Moro) (1519–1575) Anthonis van Dashorst (called Antonio Moro) (1519–1575) Follower of Alonso Sánchez Coello (c 1531–1588) Adriaen van de Venne (1589–1662) Rodrigo de Villandrando (d 1622) Peter Paul Rubens (1577–1640) Anthony Van Dyck (1599–1641) Francisco Rizi (1608–1685) Unknown German painter
	<i>The Rich Epicure</i> (nd)	Accademia (Venice)	
	<i>Cardinal Granvella's Dwarf and Dog</i> (c 1560)	Louvre (Paris)	
	<i>Court Dwarf Estevanillo</i> (1563–1568)	Staatliche Kunstsammlungen (Kassel)	
	<i>Isabella Clara Eugenia with her Dwarf</i> (c 1580)	Prado (Madrid)	
	<i>Festival in Honour of the Truce of 1609</i> (1616)	Louvre (Paris)	
	<i>Philip IV and the Dwarf Soplillo</i> (c 1618)	Prado (Madrid)	
	<i>Aletheia Talbot and her Train</i> (c 1630)	Alte Pinakothek (Munich)	
	<i>Queen Henrietta and her Dwarf Sir Jeffrey Hudson</i> (c 1633)	National Gallery (Washington)	
	<i>King Charles II of Spain Attending an Auto-da-fé Accompanied by his Three Dwarfs</i> (1680)	Prado (Madrid)	
<i>Portrait of the Dwarf Count J Boruwlaski, 1793–1837</i> (nd)	Museum Narodowe (Krakow, Poland)		