

THE RELEVANCE OF TRADITIONAL BIRD DRUGS IN RELATION TO MODERN PRIMARY HEALTH CARE IN MADHYA PRADESH, INDIA

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INTRODUCTION

If one looks back over a few centuries, one can see that in every household, it was mostly the older people who used to administer medicines for many of the diseases. Of course, in very complicated cases more experienced people who later on came to be known as physicians were consulted. This class later turned professional and the system was perpetuated hereditarily. Traditional medicine then formed part of the culture. But with the advent of allopathy there has been a great set-back for traditional medicines all over the world. In the ethno-zoological studies undertaken recently in Madhya Pradesh, I have come upon a host of facts pertaining to the use of animal drugs by the tribals in the treatment of a variety of diseases. Of these, the data pertaining to birds is dealt with in this paper.

Madhya Pradesh, a central state of India, contains the largest tribal population in the country. It is scattered over forty-one of the forty-five districts constituting this state. According to the latest census (1981), the population of this state is 52,178,844 and that of tribals is 11,987,031. During a five month ethnozoological survey (from 4th November 1982 to 4th April 1983), all the forty-one districts containing sizeable tribal population were covered. They are Balaghat, Bastar, Betul, Bhind, Bilaspur, Chatarpur, Chindwara, Datia, Dewas, Dhar, Durg, Guna, Gwalior, Hoshangabad, Indore, Jabalpur, Jhabua, E. Nimar, W. Nimar, Mandasaur, Mandla, Morena, Narasimhapur, Panna, Raigarh, Raipur, Raisen, Rajgarh, Ratlam, Rewa, Satna, Sehore, Seoni, Shahdol, Shajapur, Shivpuri, Sidhi, Surguja, Tikamgarh, Ujjain and Vidisha. According to Ali (1973) there are fifty-eight classified tribes in Madhya Pradesh. These include sub-groups of some of the larger tribes. Thirty-nine of them were covered in the survey, which include all the larger tribes and majority of the smaller tribes. They are Agaria, Baiga, Biar, Badigar, Bhumiya, Bhil, Bhand, Bhatra, Bhilalas, Binjhwar, Dhurwa, Dewar, Dhanwar, Gond, Halba, Kamar, Kavar, Khairwar, Keer, Kol, Kondh, Korku, Korwa, Madia, Mawasi, Meena, Mudia, Muria, Nagesia, Nat, Oraon, Panika, Pao, Pardhan, Pardhi, Patillah, Saur, Seharua, and Sonr.

METHODOLOGY

An exhaustive data sheet was prepared to ascertain the role of animals in the following: food, drugs, aphrodisiac value, family planning, age stabilizers, experimental

uses, mechanical uses, industrial uses, fuel, fertilizers, ornamental and decorative purposes, bioaesthetics, costume, jewellery, perfume, entertainment/games, pets/hobbies, baits, dowry/gifts, religious purpose, omen, astrology, witchcraft, harmful animals, pests, vectors, totems, taboos, etc. Along with it, the impact of animals on aboriginal cultures as well as folklores and myths about them were also studied. In the field work the tribal map of India prepared by Gohan (1971) helped us much in getting a general idea of the district-wise distribution of various tribes. Details of methodology and survey are given in an earlier paper by the author (1988).

OBSERVATIONS

Detailed uses of the birds as drugs in Madhya Pradesh are appended in tabular form. The names of birds as well as the tribes are arranged alphabetically.

Name of bird	Mode of application	Disease (s)	Name of tribe(s); the district (s) they belong to are given in bracket
1	2	3	4
Crow <i>Corvus</i> sp.	Liver roasted, dried and given for 3-4 days, once daily	Cough, cold	Gond (Chatarpur)
Crow <i>Corvus</i> sp.	Liver dried, powdered, dissolved in milk and given to children for 2 days, once a day	Most of the chronic diseases	Gond (Panna)
Crow <i>Corvus</i> sp.	Liver cooked and taken for 6-7 days, or dried, powdered and dissolved in milk and given for 6-7 days, once a day	Rickets	Khairwar (Chatarpur); Sonr (Panna)
Crow <i>Corvus</i> sp.	Liver or flesh fried in mustard oil and taken 3 times	Eye trouble (red eyes)	Panika (Shahdol)
Crow <i>Corvus</i> sp.	Flesh cooked and taken once	Red eyes	Baiga (Sidhi)
Crow <i>Corvus</i> sp.	Egg shell roasted, powdered and applied in eyes, 2-3 times	Eye trouble (general)	Halba (Balaghat)
Drongo <i>Dicrurus adsimilis</i> (Bechstein)	Liver dried, powdered, dissolved in honey and taken for 4-5 days, twice daily	Whooping cough	Pardhan (Seoni)
Hen <i>Gallus gallus</i> (L.)	A hole is made on the shell of the egg, some quantity of opium and certain herbs pushed into the yolk, then the shell completely covered with cowdung and roasted in fire, the egg orally given for 15 days, twice daily	Breathing trouble	Gond (Raipur)

1	2	3	4
Hen <i>Gallus gallus</i> (L.)	Eggs orally taken and applied externally on ribs for 5-6 days	Breathing trouble	Bhumiya (Jabalpur); Kol (Jabalpur and Narasimhapur)
Hen <i>Gallus gallus</i> (L.)	Egg massaged on body for 4-5 days, once in a day	Swelling of body	Dhanwar (Bilaspur); Khairwar (Bilaspur)
Hen <i>Gallus gallus</i> (L.)	Yolk of egg applied externally on ribs for 2-3 times only	Pneumonia, bronchial complaints	Gond (Raisen, Rewa and Shahdol); Halba (Balaghat); Keer (Raisen); Kol (Shahdol); Pao (Shahdol)
Hen <i>Gallus gallus</i> (L.)	Yolk from egg warmed, applied externally and put bandage	Internal injury, bronchial trouble	Gond (Rewa)
Hen <i>Gallus gallus</i> (L.)	Egg yolk massaged on ribs for 2-3 times	Ribs pain	Bhil (Khandawa); Gond (Betul and Jabalpur); Korku (Betul); Mawasi (Hoshangabad); Mudia (Narasimhapur); Pardhan (Jabalpur)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied externally and fomented for two times	Ribs pain	Gond (Chindwara; Hoshangabad and Mandla); Pardhan (Chindwara)
Hen <i>Gallus gallus</i> (L.)	Egg mixed with honey, applied externally on ribs and then fomented for 2-3 days, once daily	Ribs pain	Kol (Mandla)
Hen <i>Gallus gallus</i> (L.)	Egg mixed with vermilion or sugar and lime and applied on ribs for 1-2 times	Ribs pain	Gond (Seoni)
Hen <i>Gallus gallus</i> (L.)	Egg massaged on chest for 2 times	Chest pain	Korku (Sehore)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied on ribs for 3-5 times only	Cough, cold, ribs pain	Gond (Sehore)
Hen <i>Gallus gallus</i> (L.)	Egg massaged on affected part till cured	Chest pain, ribs pain	Gond (Bilaspur); Halba (Durg); Oraon (Bilaspur and Raigarh)
Hen <i>Gallus gallus</i> (L.)	Egg applied externally on ribs and joints for 2-3 days, once daily	Ribs pain, pneumonia	Baiga (Shahdol); Kol (Shahdol); Mudia (Narasimhapur); Panika (Shahdol)

1	2	3	4
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied on ribs and fomented for 2-3 times	Ribs pain, pneumonia	Korku (Raisen)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied for 10-30 days, once daily	Burns, boils	Bhil (Jhabua); Panika (Shahdol)
Hen <i>Gallus gallus</i> (L.)	A hole is made into egg, the swollen apex of finger where pus is formed inserted into it and kept for 3-4 hours, for 2-4 days, once daily	Swelling of finger	Gond (Balaghat and Bilaspur) Kondh (Raigarh); Nagesia (Surguja); Oraon (Bilaspur & Surguja)
Hen <i>Gallus gallus</i> (L.)	Egg yolk orally given to children for 2-3 times	Cold	Kawar (Shahdol)
Hen <i>Gallus gallus</i> (L.)	Egg mixed with vermilion and applied on boil on neck till cured	Boil on neck	Halba (Durg)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied on finger for 5-7 days	Pus in fingers	Gond (Bastar)
Hen <i>Gallus gallus</i> (L.)	Hole made into egg and finger inserted into it and kept for 1-2 hours	Boils with pus and pain	Bhumia (Jabalpur); Dhanwar (Bilaspur); Gond (Jabalpur, Shahdol) Halba (Balaghat); Kol (Jabalpur); Pardhan (Jabalpur)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied for 2-3 days, once daily	Burns	Dewar (Raipur); Dhurwa (Bastar); Korwa (Raigarh); Muria (Bastar); Nagesia (Surguja); Oraon (Surguja)
Hen <i>Gallus gallus</i> (L.)	Shell of egg roasted, mixed with 'Alsia' (<i>Brasica nigram</i>) oil and then applied externally on piles for 3-5 days, twice in a day	Piles	Gond (Balaghat)
Hen <i>Gallus gallus</i> (L.)	Egg orally taken for 3-4 days, once daily	Pneumonia	Baiga (Balaghat)
Hen <i>Gallus gallus</i> (L.)	Egg broken open, content stirred and orally taken for 5-8 days, once daily	Rickets	Korku (Khandawa)
Hen <i>Gallus gallus</i> (L.)	Egg orally given to patient for 10-12 days, once daily	Tuberculosis	Baiga (Balaghat); Bhil (Khandawa); Gond (Bilaspur and Durg); Pardhi (Raipur); Saur (Bilaspur)

1	2	3	4
Hen <i>Gallus gallus</i> (L.)	Egg yolk used as ear drops for one or two days, once daily	Feeble mindedness	Bhilala (Dhar)
Hen <i>Gallus gallus</i> (L.)	Egg yolk mixed with vermilion and applied externally on the swollen glands of neck for 2 times	Tonsillitis	Bhilala (Dewas)
Hen <i>Gallus gallus</i> (L.)	Egg orally given for 2-3 days once daily	General weakness	Bhūmiya (Jabalpur); Binjhar (Raigarh); Dhanwar (Bilaspur); Gond (Bilaspur and Surguja); Khairwar (Bilaspur); Kondh (Raigarh); Oraon (Bilaspur); Pardhan (Seoni)
Hen <i>Gallus gallus</i> (L.)	Egg orally given for 3-4 days, once daily	Sexual weakness in male	Gond (Surguja)
Hen <i>Gallus gallus</i> (L.)	Two raw eggs mixed in a glass of cow's urine and given in pregnancy between 4-5 months	Abortion	Khairwar (Panna)
Hen <i>Gallus gallus</i> (L.)	Two raw eggs taken by males before intercourse	Prevention of pregnancy	Khairwar (Panna)
Hen <i>Gallus gallus</i> (L.)	Egg orally taken for 3-4 days, twice daily	Lethargy, weakness	Baiga (Surguja)
Hen <i>Gallus gallus</i> (L.)	Egg yolk, orally taken as well as applied externally and put bandages for 3-4 days	Cold in children	Korku (Dewas)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied externally on the testicles for 3-4 times	Swelling and pain in testicles	Gond (Durg); Halba (Durg)
Hen <i>Gallus gallus</i> (L.)	Egg yolk applied externally at the sight of snake bite, once or twice	Snake bite	Gond (Durg)
Hen <i>Gallus gallus</i> (L.)	Egg placed on a blanket and the child make to sit on it with his anal region above the egg once daily, for 3-4 days (worms get attached to the blanket)	Roundworms, tapeworms	Gond (Seoni)
Hen <i>Gallus gallus</i> (L.)	Shell of egg powdered, dissolved in water and used as ear drops for 2-3 days, once daily	For pus in ears	Gond (Durg)
Hen <i>Gallus gallus</i> (L.)	Flesh cooked and given to impotent males	Impotency	Bhil (Dhar)

1	2	3	4
Hornbill (Not specific)	Fat mixed with mustard oil and massaged for 6-8 days, once daily	Rheumatic complaints	Gond (Satna)
Kite <i>Milvus migrans</i> (Boddaert)	Oil extracted, warmed and applied externally for 2-4 days, once daily	Rheumatic pain	Pardhi (Raipur)
Myna (Not specific)	Flesh cooked and given for children for 1-2 days, once daily	Less talk	Baiga (Sidhi)
Owl (Not specific)	Liver squashed, dissolved in water and given for 2-3 days, twice daily	Tuberculosis, fits	Seharia (Gwalior)
Owl (Not specific)	Liver squashed, mixed with breast milk and given to children for 2-3 times	Rickets	Gond (Jabalpur)
Owl (Not specific)	Liver dried, powdered and dissolved in milk or liver and milk given to children for 2-4 days, once daily	Rickets	Kol (Narasimhapur); Nat (Panna); Saur (Tikamgarh)
Owl (Not specific)	Liver fried in oil and taken 1-2 times	Rheumatic pain	Panika (Shahdol)
Owl (Not specific)	Liver boiled and taken for 5-6 days, once daily	Rickets	Bhil (Dhar)
Owl (Not specific)	Flesh rubbed on muscles for 2-3 times	Fever	Bhilalas (Jhabua)
Owl (Not specific)	Flesh cooked and taken for 5-6 days, once daily	Rickets	Bhil (Dhar)
Owl (Not specific)	Fat massaged for 4-5 days, once daily	Rheumatic pain	Panika (Shahdol)
Owl (Not specific)	Feather burnt over bone fire and fumes emitting out passed over the body	High temperature	Bhil (Jhabua)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, mixed with cane jaggery and taken for 3-4 times	Stomach pain	Saur (Bilaspur)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in mustard oil and applied externally twice	Body ache	Kondh (Raigarh)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, mixed in honey and ghee, and taken for 2-3 times	Vomiting	Kondh (Raigarh)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in mustard oil and used as ear drops, 2-3 times	Ear trouble	Panika (Shahdol)

1	2	3	4
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and taken for 3-4 days, twice daily	Smallpox, chickenpox	Halba (Balaghat)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and taken for 3-4 times	Ear trouble	Gond (Durg)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, mixed with cane jaggery and taken for 2-3 days, twice daily	Fever	Kol (Mandla)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and taken for 3-4 days, once daily	Stomach pain	Gond (Balaghat)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in water and given to children for one or two times	Vomiting	Gond (Shahdol); Halba (Bastar); Pardhan (Chindwara); Pardhi (Bastar)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, mixed with powdered pepper and dissolved in honey and taken 2-3 times	Neurotic complaints	Gond (Mandla)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and onion added to it, taken 2 or 3 times	Vomiting	Keer (Raisen)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and taken once	Scorpion bite, delirium	Gond (Mandla); Khairwar and Kol (Shahdol)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, mixed with cardamom powder and dissolved in honey, taken once	Vomiting	Bhumiya (Jabalpur)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and orally administered for 2 times	Vomiting	Gond (Chindwara, Durg, Jabalpur and Seoni); Halba (Durg); Panika (Shahdol); Pardhan (Seoni)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in honey and orally administered for about 15 days, twice daily	Cough, whooping cough	Gond (Jabalpur and Narasimhapur); Kol (Jabalpur)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in milk and taken for 2-3 days, twice daily	Vomiting	Pao (Shahdol)
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered, dissolved in cow's urine and taken by the patient for 4-5 days, once daily	Breathing trouble	Gond (Chindwara)

1	2	3	4
Peacock <i>Pavo cristatus</i> L.	Feather roasted, powdered and dissolved in water and taken by ladies on the first day of mensus, the same day cow's milk also consumed, subsequent day again cow's milk taken, third day 'kheir' (rice, sugar and milk boiled together) also given	For bearing male child	Mudia (Narasimhapur)
Peacock <i>Pavo cristatus</i> L.	Feather and peduncle of maize roasted, powdered, dissolved in water and given to children for 2-3 days, thrice daily	Cough, cold, vomiting	Baiga (Shahdol)
Peacock <i>Pavo cristatus</i> L.	Feather burnt to ash and dissolved in honey, taken once or twice	Vomiting	Binjhwar (Raigarh); Dewar (Raipur); Gond (Bilaspur); Kamar (Raipur); Khairwar (Bilaspur); Korwa (Raigarh); Nagesia (Surguja); Oraon (Surguja)
Peacock <i>Pavo cristatus</i> L.	Feather burnt to ash and dissolved in honey, taken once or twice	Cough	Pardhi (Raipur)
Peacock <i>Pavo cristatus</i> L.	Feather ground, dissolved in water and used as ear drops, 2-3 times	Ear trouble	Dhanwar (Bilaspur)
Peacock <i>Pavo cristatus</i> L.	Lower part of foot powdered, dissolved in water and used as ear drops, applied for 2-3 times	Ear trouble	Baiga (Sidhi and Surguja); Bhil (Dhar); Bhilalas (Dhar); Bhilalas (Guna); Binjhwar (Raigarh); Bhumiya (Jabalpur); Dewar (Raipur); Dhanwar (Bilaspur); Gond (Balaghat, Bilaspur, Jabalpur, Surguja and Vidisha); Kamar (Raipur); Korku (Dewas); Kawar (Shahdol and Surguja); Korwa (Raigarh); Meena (Vidisha); Nagesia (Surguja); Pardhan (Seoni); Pardhi (Raipur); Oraon (Raigarh and Surguja); Sur (Bilaspur); Seharla (Guna, Morena and Vidisha)

1	2	3	4
Peacock <i>Pavo cristatus</i> L.	Lower part of foot ground, dissolved in water or breast milk and used as ear drops for 1-3 days, once daily	For ear trouble in children	Keer (Raisen)
Peacock <i>Pavo cristatus</i> L.	Lower part of foot ground in water, mixed with vermilion and used as ear drops	Ear trouble	Gond (Mandla)
Peacock <i>Pavo cristatus</i> L.	Lower part of foot ground in water and applied externally on ribs for 1-2 days, once daily	Ribs pain	Gond (Raisen)
Peacock <i>Pavo cristatus</i> L.	Lower part of foot boiled in oil and massaged externally on joints till pain subsides	Rheumatic pain	Mudia (Narasimhapur)
Peacock <i>Pavo cristatus</i> L.	Lower part of foot framed in copper and hung below backbone till pain subsides	Schiatic pain	Biar (Sidhi)
Peacock <i>Pavo cristatus</i> L.	Bone of foot boiled in mustard oil and the oil used as ear drops	Ear trouble	Gond (Durg); Halba (Balaghat and Durg)
Peacock <i>Pavo cristatus</i> L.	Bone of foot powdered, mixed with oil and used as ear drops, for 1 day, 2-3 times	Ear trouble	Bhilalas (Dewas and Sehore); Gond (Chindwara); Kondh (Raigarh); Pardhan (Chindwara)
Peacock <i>Pavo cristatus</i> L.	Bone of foot ground in oil and applied externally on ribs till pain persists	Ribs pain	Pardhan (Chindwara)
Peacock <i>Pavo cristatus</i> L.	Bone of foot ground, dissolved in water at room temperature or sometimes slightly warmed and used as ear drops for 1-3 days, once a day	Ear trouble	Baiga (Balaghat); Bhattra (Bastar and Indore); Bhil (Ratlam); Bhilalas (Rajgarh); Dhurwa (Bastar); Gond (Betul, Hoshangabad, Khandawa, Narasimhapur, Raipur, Raisen, Sehore and Sidhi); Korku (Betul, Hoshangabad, Raisen and Sehore); Mawasi (Hoshangabad)
Peacock <i>Pavo cristatus</i> L.	Bone of foot powdered and dropped in ears for 2-3 times, once daily	Ear trouble	Bhil (Jhabua & Ratlam); Bhilalas (Ujjain); Seharja

1	2	3	4
			(Rajgarh); Baiga (Shahdol); Bhumiya (Jabalpur); Gond (Seoni and Shahdol); Kol (Jabalpur, Mandla and Shahdol); Mudia (Narasimhapur); Panika (Shahdol); Pardhan (Jabalpur)
Peacock <i>Pavo cristatus</i> L.	Bone of foot ground in oil and massaged externally for 2-3 days, thrice a day	Body swelling	Baiga (Shahdol)
Peacock <i>Pavo cristatus</i> L.	Generally bone of foot or any other bone powdered, dissolved in oil (preferably in mustard oil) and used as ear drops, 2-3 days, once a day	Ear trouble	Bhand (Satna); Bhumiya (Panna and Satna); Gond (Bhind, Chatarpur, Satna and Tikaamgarh); Khairwar (Chatarpur and Panna); Kol (Narasimhapur and Panna); Pao (Satna); Saur (Tikamgarh); Seharia (Gwalior); Sonr (Panna)
Peacock <i>Pavo cristatus</i> L.	Bone powdered and administered to children for 3-4 days, once a day	Breathing trouble	Bhilalas (Shajapur)
Peacock <i>Pavo cristatus</i> L.	Bone powdered and applied over wounds of bulls for 2-3 days, once a day	Cuts, severe wounds	Bhil (Jhabua)
Peacock <i>Pavo cristatus</i> L.	Bone hung on lower part of feet till pain subsides	Severe muscular pain	Kol and Pao (Satna)
Peacock <i>Pavo cristatus</i> L.	Bone powdered, dissolved in water and used as ear drops, 2-3 days, once daily	Ear trouble	Korku (Bhind); Mawasi and Pahalwan or Nat (Satna); Seharia (Datia and Shivpuri)
Peacock <i>Pavo cristatus</i> L.	Bone powdered, mixed with mustard oil and garlic and used as ear drops, applied 2-3 times	Ear trouble	Gond (Panna)
Peacock <i>Pavo cristatus</i> L.	Bone powdered and applied in eyes for a few times	Eye trouble	Sonr (Panna)
Peacock <i>Pavo cristatus</i> L.	Bone roasted, dissolved in lemon juice and used as ear drops for 2-3 times	Ear trouble	Nat (Panna)

1	2	3	4
Peacock <i>Pavo cristatus</i> L.	Nail roasted, powdered and dissolved in mustard oil and used as ear drops for 4-5 days, once daily	Ear trouble	Kol (Satna)
Peacock <i>Pavo cristatus</i> L.	Fat massaged at the broken bone for 6-10 days, once daily	To join the broken bone	Keer (Raisen)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood orally administered for 6-7 days, once a day	Asthma	Oraon (Raigarh)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood consumed for about a week, once daily	Paralysis	Gond (Jabalpur and Shahdol); Halba (Bastar); Kol (Narasimhapur)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood taken for 10-15 days, once daily	Tuberculosis	Gond (Chindwara)
Pigeon <i>Columba livia</i> Gmelin (Wild) (Black)	Fresh blood orally given and massaged externally till cured from disease	Paralysis	Gond (Durg)
Pigeon <i>Columba livia</i> Gmelin (Wild) (Black)	Blood massaged on affected part for 2-4 days, once a day	Rheumatic and muscular pains	Bhilalas (Jhabua)
Pigeon <i>Columba livia</i> Gmelin (Wild) (Black)	Blood massaged externally on the affected part for 15-20 days or more	Paralysis	Bhil (Dhar, Jhabua and Ratlam); Bhilalas (Dhar and Ujjain)
Pigeon <i>Columba livia</i> Gmelin (Wild) (Black)	Blood massaged on affected part for 10-15 days, once a day	Paralysis	Baiga (Shahdol); Bhil (Khandawa); Bhilalas (Dewas and Khandawa); Bhumiya (Chatarpur); Binjwar (Raigarh); Dhanwar (Bilaspur); Gond (Balaghat, Bastar, Betul, Bilaspur, Chindwara, Khandawa, Narasimhapur, Raipur, Raisen and Sehore); Halba (Durg); Kawar (Raipur and Shahdol); Keer (Raisen); Khairwar (Bilaspur);

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			Kol (Jabalpur, Mandla and Shahdol); Korku (Betul, Dewas, Hoshangabad, Khandawa, Raisen and Sehore); Korwa (Raigarh); Mawasi (Hoshangabad); Mudia (Narasimhapur); Oraon (Bilaspur and Raigarh); Pardhan (Chindwara and Narasimhapur); Pardhi (Bastar and Raipur); Saur (Bilaspur); Seharla (Satna)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood orally administered for 6-7 days, once daily	Breathing trouble, paralysis	Saur (Bilaspur)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood massaged and flesh consumed for 10-15 days, once a day	Rheumatic complaints, paralysis	Gond (Bhind)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood and flesh boiled and consumed for 1-2 days, once a day	Paralysis, to reduce heart beat	Panika (Shahdol)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood and flesh mixed with hen's eggs and taken for 10-15 days, once daily	Tuberculosis	Korku (Bhind)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Blood mixed with soil and massaged on affected part till cured, once daily	Paralysis	Gond (Panna).
Pigeon <i>Columba livia</i> Gmelin (Wild)	Flesh cooked and consumed for 3 days, once daily	Cough, breathing trouble	Mudia (Narasimhapur)
Pigeon <i>Columba livia</i> Gmelin (Wild)	Flesh boiled and consumed for 8-10 days, twice daily	Tuberculosis	Gond (Bastar, Mandla and Narasimhapur)
Pigeon <i>Columba livia</i> Gmelin (Wild) (Preferably caught from wild)	Flesh boiled or cooked and consumed for 10-15 days, twice daily	Paralysis	Bhil (Dhar, Jhabua and Ratlam); Bhilalas (Dhar and Ujjain); Halba (Bastar)

1	2	3	4
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Flesh boiled and consumed for 2-3 days or more, twice daily	Breathing trouble	Gond (Tikamgarh); Oraon (Surguja)
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Flesh cooked and consumed for 2-3 weeks, once a day	Paralysis	Baiga (Shahdol); Bhil (Khandawa); Bhillalas (Khandawa and Ujjain); Gond (Balaghat, Bastar, Betul, Bilaspur, Chindwara, Durg, Jabalpur, Khandawa, Mandla, Narasimhapur, Raipur, Raisen, Sehore and Shahdol); Halba (Bastar and Durg); Kawar (Raipur); Keer (Raisen); Khairwar (Shahdol); Kol (Jabalpur, Narasimhapur, Mandla and Shahdol); Korku (Betul, Dewas, Hoshangabad, Khandawa, Raisen and Sehore); Mawasi (Hoshangabad); Mudia (Narasimhapur); Oraon (Bilaspur and Raigarh); Pardhan (Chindwara, Narasimhapur and Seoni); Pardhi (Bastar and Raipur)
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Flesh and blood cooked and consumed for 3-4 days, twice daily	Breathing trouble	Dewar (Raipur)
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Small quantity of flesh or blood orally administered for 10-15 days, once a day	Rheumatic pain	Mawasi (Chindwara)

1	2	3	4
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Flesh burnt, mixed in hare's blood and given for 2-3 days, twice a day	Paralysis, breathing trouble	Seharia (Gwalior)
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Flesh burnt to ash, dissolved in honey and given for 9-10 days, thrice daily	Breathing trouble	Saur (Tikamgarh)
Pigeon <i>Columba livia</i> Gemlin (Wild) (Preferably caught from wild)	Juice of flesh extracted, mixed with blood and consumed for 10-15 days, twice a day	Paralysis	Bhattra (Bastar)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Flesh warmed and juice extracted, consumed for 4-5 days or more, twice daily	Paralysis	Binjhar (Raigarh); Dhanwar (Bilaspur); Halba (Balaghat); Khairwar (Bilaspur); Korwa (Raigarh)
Pigeon <i>Columba livia</i> Gemlin (Wild)	One entire pigeon boiled in about one litre of water and the juice consumed, meat cooked and consumed in two or three times	Paralysis	Gond (Seoni)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Flesh cooked, consumed and blood massaged over the affected region for 10-15 days, once or twice daily	Paralysis	Bhil (Indore and W. Nimar); Bhilalas (Rajgarh, Seoni and Shajapur); Gond (Chatarpur); Khairwar (Chatarpur and Panna); Meena (Vidisha); Nat (Panna); Saur (Chatarpur); Seharia (Shivpuri and Vidisha)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Fat massaged till disease cured	Rheumatic complaints	Gond (Satna)
Pigeon <i>Columba livia</i> Gemlin (Wild)	A pigeon boiled and the patient exposed to the vapour emitting from it in a closed room for about an hour	Paralysis	Gond (Chindwara)

1	2	3	4
Pigeon <i>Columba livia</i> Gemlin (Wild)	A globule of excreta mixed with a little cane jaggery and consumed by ladies for one or two days, once a day	Menstrual complaints (in case of stoppage of menstruation, for normal menstruation)	Mudia (Narasimhapur)
Pigeon <i>Columba livia</i> Gemlin (Wild)	A little excreta dissolved in curd and consumed by the patient for 4-5 days, twice daily	Breathing trouble, asthma	Oraon and Saur (Bilaspur)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Bits of excreta applied on the belly of children for 2-3 times	Rickets	Bhilalas (Shajapur)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Feathers used to fan wind at the affected part for 15-30 days, thrice daily	Paralysis	Baiga (Shahdol); Bhil (Ratlam); Bhilalas (Dewas, Khandawa, Sehore, Shajapur and Ujjain); Gond (Betul, Balaghat, Bilaspur, Jabalpur, Narasimhapur, Raipur, Raisen, Sehore, Seoni, shahdol and Vidisha); Kawar (Shahdol); Keer (Raisen); Khairwar (Bilaspur); Kol (Shahdol); Korku (Dewas, Hoshangabad, Khandawa, Raisen and Sehore); Mawasi (Hoshangabad); Mudia (Harasimhapur); Oraon (Bilaspur); Pao (Shahdol); Pardhan (Chindwara and Narasimhapur); Pardhi (Bastar); Saur (Bilaspur)
Pigeon <i>Columba livia</i> Gemlin (Wild)	Live pigeon tied to the hands or kept in underarm and the heat released from the body of pigeon is believed to be absorbed by the paralysed muscles	Paralysis	Pardhan (Seoni)

1	2	3	4
Pigeon <i>Columba livia</i> Gemlin (Wild)	A bird cut into 2 pieces and tied on the ear lobes covering them and left for 1-2 hours, then cooked and consumed	Paralysis	Panika (Shahdol)
Vulture <i>Gyps sp.</i>	Blood applied externally for 4-5 times	Boils	Kol (Panna)
Vulture <i>Gyps sp.</i>	Fat warmed and applied externally for 3-4 days, once daily	Rheumatic complaints	Seharia (Morena)

SUMMARY

Analysis of data collected shows that there are altogether 136 medical applications of birds or their derivatives among 39 tribes belonging to 41 districts of Madhya Pradesh. Group-wise breakup of applications is: peacock 44, hen 38, pigeon 33, owl 9, crow 6, vulture 2, drongo 1, hornbill 1, kite 1 and myna 1. The hen's egg has the maximum number of applications as a single derivative. There are 37 of them used in curing a variety of diseases: breathing trouble, swelling of body, pneumonia, bronchial trouble, ribs pain, chest pain, joint pain, swelling and pain in testicles, cough, cold, burns, boil, swelling of finger, boil on neck, pus in ears, piles, rickets, tuberculosis, feeble mindedness, general weakness, sexual weakness in male, abortion, tonsillitis, prevention of pregnancy, snake bite, round worms and tapeworms. It may be because of hen's close association with human beings. This is followed by the feather of peacock having 22 applications; curing stomach complaints, body ache, ear trouble, small pox, chicken pox, fever, vomiting, neurotic complaints, scorpion bite, delirium, cold, cough, whooping cough, breathing troubles and for bearing male child. No wonder that in ancient times peacock was one of the most sought after export items from India. Similarly, the maximum number of applications of a single derivative for curing a particular disease is the blood of pigeon. It is massaged for cure of paralysis by 21 tribes in 19 districts. Some of the other widely applied drugs are the lower part of foot of peacock for ear trouble (by 19 tribes in 14 districts); feather of pigeon for paralysis (by 16 tribes in 19 districts); and flesh of pigeon for paralysis (by 15 tribes in 19 districts). It is interesting to note that pigeon plays an important role in the treatment of paralysis. There are as many as 19 applications, the parts made use of in majority of cases are blood/flesh.

The bones, feet and claws of peacock have 13 modes of applications for curing ear trouble. These parts contain abundant calcium. It is, therefore, probable that calcium plays a significant role in curing ear complaints. This view is further supported by the fact that tribals often use the shells of cowrie for the same purpose.

DISCUSSION

From the above account it can be deduced that the traditional animal drugs are much more relevant today than any other time because the great majority of people in developing countries cannot afford allopathic treatments, especially in complicated and serious cases, owing to the prohibitive cost. This system has an added advantage when compared to the allopathic system. Its efficacy has been proved by the generations and it has practically no side effects. So it is high time that every modern primary health care centre should have a physician well versed in traditional drugs. It is also required to open training and research centres to bring traditional drugs on firmer scientific footing. If researches show that some of these organs used in curing have no pharmaceutical value, except as a source of rich protein and vitamin, then the tribals must be educated properly. Those birds which possess special curative qualities should be cultured and must be made available in large numbers which will not only help in curing diseases but also will give employment opportunities. This will also prevent the extinction of many of the dwindling species of birds. The tribals normally kill the birds for curing a particular disease at a time making use of only one or two organs, while discarding most of the other parts. But in a bird farm all the useful derivatives can be preserved and be utilised as and when required.

The scanty knowledge of traditional animal drugs is obvious from the fact that there is not much literature available on the subject except for the occasional notings in the writings of Verrier Elwin and other eminent anthropologists and in reports of different forest departments, travelogues and gazetteers. Even in 'Materia Medica' by Kent (1970) mention is made only about a dozen animals that are being utilised; curiously enough not a single one of them is a bird. Much general information is available in 'A Dictionary of Indian Raw Materials and Industrial Products : The Wealth of India Raw Materials' published by the Indian Council of Scientific and Industrial Research, New Delhi (1948-1976). In conclusion it may be stated that this being a new concept, the study needs many years of painstaking research for its proper development.

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